

# ACCE News

Vol. 7, No. 6 - November 1997

American College of Clinical Engineering

## First ACCE Symposium

May 30, 1998 is a very special day in the life of ACCE. Our first symposium devoted exclusively to the needs and concerns of our members. Be part of the brainstorming to develop effective strategies to excel in today's competitive environment. Engage fellow members in the think tank environment of the ECRI campus to create position statements on rightsourcing and future directions for clinical engineers.

## National Engineers Week

February 22-28, 1998 is National Engineers Week. Clinical engineering departments from coast to coast have used this week as a way to heighten awareness of the critical role clinical engineers play in health care. Michigan clinical engineers will mark the week by focusing on the clinical engineers role in operating room fires. Clinical engineers involved in scouting will involve engineering and medical explorer posts. High schools are a prime target for spreading the word to

the future generation. For full details on this important week look to the internet at [www.eweek.org](http://www.eweek.org).

## Teleconferences For You

Don't miss the last noon time teleconferences of the 1997 Series, Dr. Binseng Wang on Financial Management. Get a good start on 1998 with Bill Betts. Call for details: Frank Painter at 203-384-3388; 3993 fax.

### Financial Management for Clinical Engineering

Dr. Binseng Wang Dec. 18, 1997

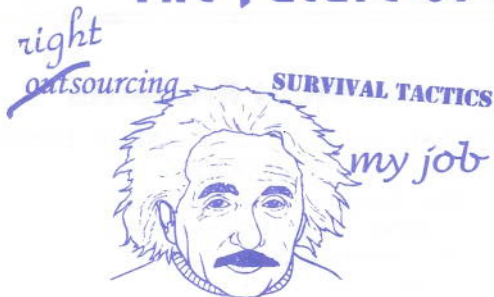
### Outsourcing Support Services.

### Are You Prepared?

Bill Betts Jan. 15, 1998

## First ACCE Symposium

### The Future of Clinical Engineering



think tank  
brain storming

Saturday, May 30, 1998 ECRI Campus Plymouth Meeting, PA

contact Jennifer Ott [ottj@slucare1.sluh.edu](mailto:ottj@slucare1.sluh.edu) 314-577-8018; 314-268-5178 fax



# ACCE News

## ACCE Mission

1. To establish a standard of competence and to promote excellence in Clinical Engineering Practice.
2. To promote safe and effective application of Science and Technology to patient care.
3. To define the body of knowledge on which the profession is based.
4. To represent the professional interests of Clinical Engineers.

## President's Message

Frank R. Painter, [frpainter@aol.com](mailto:frpainter@aol.com)

I just returned from the 17th Annual Northeastern Biomedical Engineering Symposium. As treasurer of the New England Society of Clinical Engineering I just finished counting the beans and am pleased to report that the meeting was a resounding financial success. No doubt a great deal is owed to the dedicated efforts of the members of the four regional societies that each year support this event. We put in a lot and get out a lot in return. I am encouraged by the level of volunteerism I see within the ACCE. Nevertheless, there is always room for more help. Committees need people to work effectively. Take a look at your ACCE Committees and determine what is best for you. We need to advocate, we need to tell our success stories, we need to keep the editor supplied with our stories, we need to talk to government officials, we need to reach out beyond the usual audience and speak to all professionals that affect the course of health care, we need to talk to the public, to the schools, to our friends. Tell them what you are and what you do. Mark your calendars now for clinical engineering brainstorming at its best, the First ACCE Symposium, to be held May 30, 1998, in Philadelphia at ECRI. See you all there.



Frank R. Painter

## ACCE News

**ACCE News** is the official newsletter of the American College of Clinical Engineering (ACCE).

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### Editor

Joseph F. Dyro, Ph.D., CCE  
21 Bob's Lane, Setauket, NY 11733  
[jfdyro@aol.com](mailto:jfdyro@aol.com); (516) 751-7244; -7802 Fax

### Assistant Editor

Rachel Mercado, [mercadr@cpmail-am.cis.columbia.edu](mailto:mercadr@cpmail-am.cis.columbia.edu)

### Advertising Manager

Caroline Campbell, [cac1@mhg.edu](mailto:cac1@mhg.edu); (202) 877-7151 (Rates and Deadlines)

### Address corrections:

Jennifer C. Ott,  
3635 Vista Ave at Grand Blvd.  
St. Louis, MO 63110-2520  
[JCottSLU@aol.com](mailto:JCottSLU@aol.com); (314) 577-8018; (314) 268-5178 Fax

### ACCE

5200 Butler Pike  
Plymouth Meeting, PA 19462-1298  
(610) 825-6067

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## Do Engineers Take Themselves Too Seriously?

George I. Johnston, PE, CCE, johnstog@worldnet.att.net

Do engineers take themselves too seriously? They may have reason to! Engineers are sensitive to the use and misuse of the term *engineer*. There are railroad engineers (those who drive the train in particular), heating plant and boiler engineers (those who stoke the furnace and watch the gages) and even domestic engineers, those, usually female, who perform cleaning services. The general public is not only aware of this misuse of the term *engineer* but continues to perpetuate it, helped along by dictionaries including as a second definition "one who operates an engine, especially the driver of a railroad locomotive." Engineers are also frustrated by the lesser professional recognition they receive as compared to other professionals such as physicians and lawyers. Engineers, at least the ones practicing publicly and billing themselves as engineers, must pass exams every bit as strict as those required of physicians and lawyers in order to become licensed. Perhaps one of the problems here is that the majority of engineers do not opt to practice publicly but instead are hired as engineers in government or private enterprise where licensing is not required. Yet in countries such as those in Europe, the term *engineer* immediately conveys a sense of status whether the individual practices publicly or not and is often used behind one's name. In Norway more than twenty-five years ago, I noticed it followed a person's name in telephone book listings.

Engineers, myself included, are often frustrated by other ways in which this diminished recognition surfaces. In my college days engineering was often jokingly referred to as pre-business and administration because so many engineering students who were unable or unwilling to make it in engineering opted for an easier program, frequently in business and public administration. Yet years later, many of us engineering graduates often were working, at far less salary, for those same business and public administration graduates.

One effort to counter this problem has been to push for professional registration of *all* engineers. Many of you may remember Bill Jarzembski at the annual IEEE-EMBS and AAMI meetings who would climb on this soapbox at any opportunity. I think registration is great and would like to see every engineer registered. I hesitate to wish that it made a requirement to practice except when the public is affected or where no professional can evaluate the engineer's expertise. I also know how hesitant engineers might be to take the examine, particularly the EIT, after being out of school for an extended period. I did it after almost twenty years post baccalaureate and know how brutal that experience is. The same is true for our CE exam. I know more than one CCE who has said "would hate to try that exam now."

Other efforts are equally unrealistic and sometimes downright counterproductive. For instance, the Oregon State Board of Engineering Examiners by statute under ORS 672.007-672.045 states:

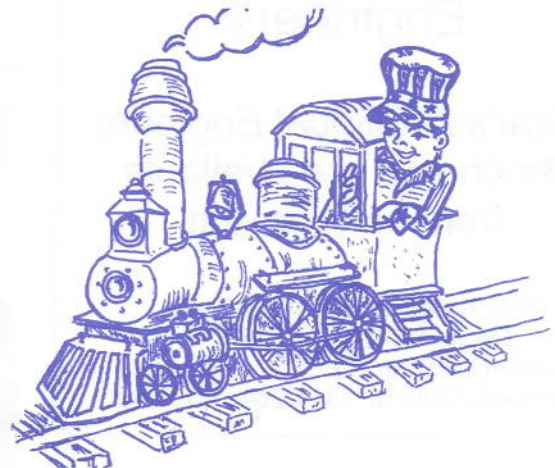
*OREGON LAW DECLARES IT UNLAWFUL FOR A NON-REGISTERED individual to practice or advertise to*

*practice professional engineering in any branch, or land surveying, or to use any title conveying the impression that he/she is a Professional Engineer or Professional Land Surveyor.*

A few years back *The Board* noted that a woman operating a domestic cleaning service was billing herself as a "domestic engineer" and took her to court to force her to cease calling herself an engineer. The local newspaper got hold of this and, as you might guess, had a field day making *The Board* look like a bunch of bullies and the poor beleaguered woman a heroine for standing up to them. Eventually the suite was dropped.

This brings me to the point of my writing. Many people view engineers as stuffy and ultraconservative. In my opinion there is as much variety in engineering personalities as anywhere else, but perception is the important factor here. If the general public opinion is that engineers have a certain stereotype, there is little one can do to change it. Unfortunately, there is much one can do that reinforces it. The following case illustrates this:

Last August I received a humorous e-mail based on engineering stereotypes. My wife and I got quite a kick out of it, even identifying some of my behavior traits. The article was circulated to quite a few engineers (I don't know how many) and received mixed reactions (some enjoyed it, others thought it degrading to engineers and again I don't know the breakdown). My feeling, however, is that if one makes a big issue of it, particularly publicly, the public will indeed perceive engineers as overly sensitive and behaving much like the stereotypes they resent. On the other hand, if we see the humor and react accordingly, we will present a much warmer image and publicly belie the stereotypes we are charged with.



*by Arlene Johnston*

Another case in point (closer to home): When drafting the ACCE brochure *What's A Clinical Engineer*, I elected to inject a little humor based on those old chestnuts about engineers being the guys that drive the train and tend the boiler. By including some cartoons (shown above and below) depicting those activities, but at the same time captioning them with "A clinical engineer is not...", I hoped to use a well-known cliché to positive effect. I was overruled on this, and perhaps rightfully so, considering the potential breadth of the



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audience and intent for this brochure. Yet once again it left me with the feeling that many of us engineers are overly sensitive and thin-skinned. What's your opinion and how should we deal with these engineering problems (engineers are noted as problem solvers). I'd like to hear from you.



*by Arlene Johnston*

## What's A Clinical Engineer?

What's A Clinical Engineer Brochures are available from Jennifer Ott

3635 Vista Ave at Grand Blvd.  
St. Louis, MO 63110-2520  
JCottSLU@aol.com;  
(314)577-8018; (314)268-5178 Fax

## The 20th Mexican Congress

*Roberto Ayala, CCE. cmt@DNS.dsinet.com*

Colima was the beautiful and charming site of the 20th National Congress of the Mexican Biomedical Engineering Society (SOMIB). The three major

universities in Mexico with programs in biomedical engineering and clinical engineering research and teaching (UIA, UAM and IPN) were well represented. Among the almost 200 participants were professionals from the healthcare sector, researchers, clinical engineers, educators and industrial representatives. Four days saw presentations and lectures on almost all areas of biomedical engineering including instrumentation, biomechanics, image processing, and clinical engineering. The third day was devoted exclusively to clinical engineering. Congress participants discussed technology management, the acquisition process, and software for technology control. All enjoyed the nice, interesting and informative speech of none other than our great *ACCE News* editor, Joe Dyro. He gave very important tips on how to deal with the challenging work of a clinical engineer, based on his experience. He showed the participants how the American College of Clinical Engineering supports and advances health care through its many programs, committee work and member participation.

A delightful lunch was taken under a portico by the town square of neighboring Comala. Sweet and exuberant strands of the mariachis' instruments and voices refreshed our souls and injected just the right amount of mirth and merriment. The lunch was superb. In the evening we discussed with Dyro the ways in which SOMIB and ACCE can collaborate in the future. The Congress ended on Saturday the 25th and was followed by another nice musical lunch where Dyro showed us that he is better at clinical engineering than dancing.

Finally, I would like to remind all of our American colleagues that next year our Congress will be held in Mazatlán, a beautiful place with great beaches on the Pacific coast. This 21st Congress is especially important because it will be held in conjunction with the 9th Meeting of the Administrative and Executive Council of CORAL, the 4th International Conference on Clinical Engineering (co-organized between SOMIB and the Clinical Engineering Division of the IFMBE) and The First Latin-American Conference on Biomedical Engineering (co-organized by CORAL (Latin American Regional Council Members) and SOMIB). An ACCE Advanced Clinical Engineering Workshop will be held as well.



### Mexican Congress Participants

(Left to right) Joe Dyro, Humberto Hernández, Victoria González, Mariana Trejo, Lorena Garza, Roberto Ayala, Isaías Castro, Adriana Velázquez, Rene Tera



## Adventures in Health Care

Joseph F. Dyro, [jfdyro@aol.com](mailto:jfdyro@aol.com)

Arriving early in Mexico gave me a day to visit several health care institutions in Mexico City before flying to Colima, site of the 20th National Congress of Biomedical Engineering. Hostess Adriana Velázquez was kind enough to arrange a full day of visitation. I saw a broad range of institutions both public and private, large and small. It was a good chance to renew friendships with clinical engineers in Mexico City, a good chance to learn of the developments in clinical engineering, and an opportunity to view the administration of health care from an unusual perspective.

I was particularly impressed by work being done by a team of clinical engineers under the direction of Adriana Velázquez to improve health care delivery in Mexican hospitals by the use of technology management techniques. In this pilot study, high-end technologies such as cath labs are closely managed to optimize utilization, minimize cost of operation, and maximize performance and safety. The work I saw at the 1500-bed General Hospital is but one indicator of significant advances in the practice of clinical engineering in Mexico. A brief visit to Dr. Fernando Prieto's biomedical engineering department presented another model for technical support. At the Hospital Angeles I observed Claudia Cardenas, CCE, who developed the clinical engineering department, and has since moved to an upper management position in charge of all engineering and technology. Anabel directs clinical engineering. Humberto Hernández, CCE, who provides services to a network of dialysis centers, showed me one of his centers at Medica Sur, a private hospital formed and managed by a corporation of physicians. The Cancerology Hospital has a fledgling department but its competent clinical engineer is already having a positive impact by her management of technology.

What, you may ask, was the unusual perspective on health care? An abscessed tooth, a night of pain, and fear of the unknown required emergency dental intervention at the skilled hands of Adriana's endodontist, Dr. Tamara Oynick who so kindly accommodated me, enabling your editor to attend the Congress and to continue his work today for *ACCE News*:



Doctor Tamara Oynick Saves Editor's Life

Vol. 7, No. 6, 1997

Our gracious hosts ensured a most delightful week in Mexico. I can still see the sea of lights twinkling across the vast expanse that is Mexico City as Humberto, my wife, Betsy, and I enjoyed a delightful early evening snack high on a mountain overlooking the city. The strands of the mariachis were a fine complement to dinner with Adriana and her husband Hector - delicious food, rare tequila, and warm company. I look back on my visit with pleasant memories and look forward to returning soon. I encourage all to read the following announcement of major clinical engineering events occurring in Mexico in 1998.

## Come to Mexico in 1998

Adriana Velázquez, [104552.35@compuserve.com](mailto:104552.35@compuserve.com)

Next year, November 11 to 14, in beautiful Mazatlán with its nice beaches with nice Mexican touristic areas, the following events will occur:

1. The XXI National Biomedical Engineering Conference (organized by the Mexican Society of Biomedical Engineering (SOMIB))
2. The First Latin-American Conference on Biomedical Engineering (co-organized between CORAL (Latin American Regional Council Members ( and SOMIB))
3. The IVth International Conference on Clinical Engineering (co-organized between SOMIB and the Clinical Engineering Division of the IFMBE)
4. CORAL IX: Meeting of the Administrative and Executive Council of CORAL
5. ACCE Advanced Clinical Engineering Workshop (November 4-10)

CORAL members are from the following countries: Argentina, Colombia, Chile, Cuba, México, Perú and Venezuela and is constituted by the National Societies of Biomedical Engineering (members of IFMBE) and chapters of countries which are members of IEEE EMBS.



Congress Participants Enjoying Lunch on Comala's Town Square

**ACCE**  
ADVANCED CLINICAL ENGINEERING WORKSHOP

**November 4-10, 1998**

**Mazatlán, Mexico**

contact: [JoeDyro](mailto:JoeDyro), [jfdyro@aol.com](mailto:jfdyro@aol.com) 516-751-7244; 7802 fax



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## Northeastern Biomedical Symposium

Joseph F. Dyro, [jfdyro@aol.com](mailto:jfdyro@aol.com)

Many ACCE members were among the 300 in attendance at the 17th Annual Northeastern Biomedical Symposium, Nov. 3-5, in Sturbridge, MA. The annual meeting is sponsored by the New England Society of Clinical Engineering, Iroquois Biomedical Society, Medical Device Society and the Northern New England Society of Biomedical Technology. This conference is the highpoint of the societies' educational activities and serves as a successful model to other regions. The continued success of the Symposium is the result of a common commitment of the member societies to provide a vehicle for the exchange of information and in so doing enhancing the technical support of the health care industry. The 45 exhibitors were pleased by the turnout. ACCE's presence was strongly felt especially through the presentations of the following members: **Joe McClain, Ira Tackel, Frank Painter, Mark Brody, Dave Dickey, Bob Morris, Joe Dyro, Mary Ann Kelly, Joe Bronzino, Dave Harrington, Ray Zambuto, and Nick Noyes.**

In his keynote address, *The changing field of clinical engineering*, **Joe McClain** described how the Walter Reed Army Hospital provided direction for the development of clinical engineering programs throughout the country. Joe reviewed the history of clinical engineering, looked at changes in the field and told attendees how to prepare for the future. His forecast: more organizations will put into action the idea that people are their most important assets. Systems for managing and maximizing human performance will take on more significance. Clinical engineers will have much at stake in implementing systems to document and manage workforce skills and knowledge. They will need to hone their skills in such areas as job analysis, task analysis, evaluation, and competency modeling. McClain cited three reasons for the clinical engineer in the future to be responsible for the maintenance of all



McClain flanked by Symposium Committee Co-Chairmen Tom Hayes (l) and Nick Noyes

equipment in a healthcare facility: (1) electromagnetic interference (EMI) has caused degradation to medical devices leading to missed diagnoses, injuries and death (technologies to be managed include LAN's, communication systems, electronics, and PCs); (2) clinical engineering professionals are excellent maintenance managers because that is what they are trained to do; and (3) consolidating maintenance management eliminates redundancy reducing required staff by from 10 to 20 percent. The clinical engineer is particularly adept at increasing quality and reducing cost.

ACCE's **Ira Tackel** joined Doug Crawford, Dave Wilder and Tom Lenehan in a panel discussion on *Outsourcing in your future.*



Tackel, Crawford, Wilder and Lenehan (l to r)

Tackel said, *the best approach is not to save your job rather do the best for the institution. Do the right thing and things will work out.* He stressed proving success to the administration and the Chief Financial Officer in particular with his example of cost savings through second source glassware. Crawford said the two things that make the most impact are getting control of all service dollars in the institution, preferably under one budget, and reporting to the topmost level of management so that the story doesn't get filtered through the layers. Wilder remarked, *with technicians it is not technical expertise but customer satisfaction that is most important.* His advise for department directors, *If you're not it, step aside.* Tom Lenehan emphasized the need to *get the word out there.* His department's newsletter with a report on significant cost savings through contract management, recently caught the eye of the CEO.

ACCE's **Dave Dickey** gave a no-nonsense, down-to-earth talk on *Comprehensive clinical equipment service; cost management; and saving your job by growing your department.* He challenged the audience of busy professionals to ask themselves if they are busy doing the right things. Keen insights and alternative strategies were shared with the audience. He urged clinical engineering departments to strive for a professional image of self and surroundings while tackling issues of quality assurance, risk management and control of vendors. Scope of operation should span the spectrum from imaging technologies and information services to beds and wheelchairs. Cost management begins with knowing the total cost of the institution's medical devices and the total cost of the acquisition of technology. The ratio of cost of service to the cost of the device inventory ought to be kept between 4 and 5 percent. Seven tips for lowering the cost of ownership were offered:

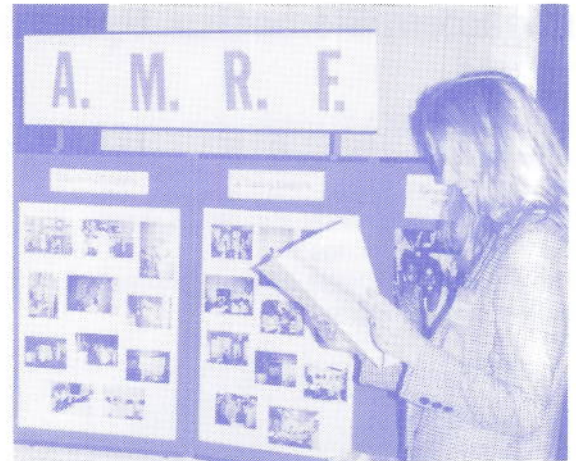
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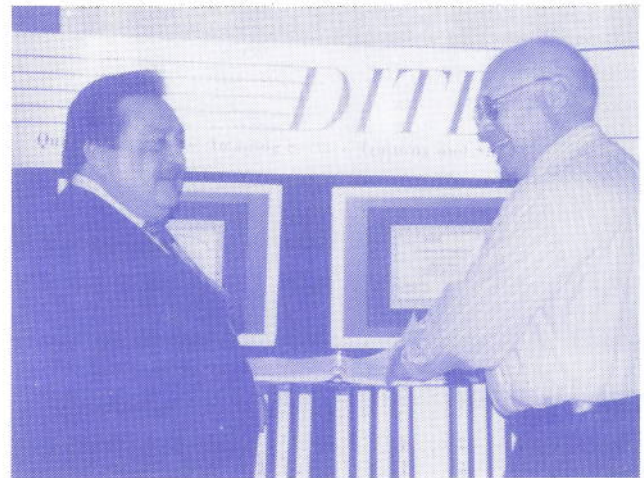
Booty brightens Berkovits - Plant ponders



AMRF Director Howley amused by the News

## Pictures at an Exhibition

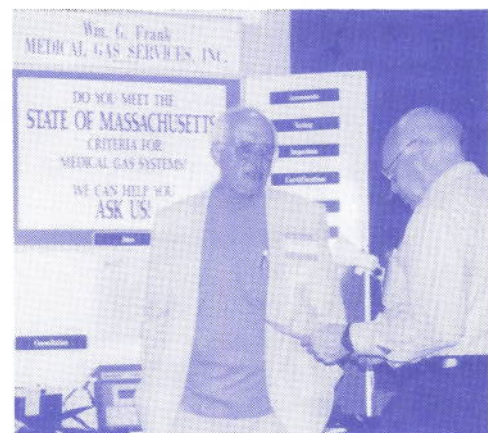
Northeastern Biomedical Symposium



DITEC's Manny Roman (l) cheers Bob Morris



ACCE members swarm over the exhibits



Dr. Oxygen, a.k.a. Bill Frank, vents to Morris (r)



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## Northeastern Biomedical Symposium

*continued from p. 6*

1. Switch from OEM full service to time and materials
2. Increase staff productivity
3. Decrease PM workload
4. Purchase part more wisely, e.g. second source
5. Use ISO's and depot repair
6. Plan properly, negotiating during acquisition phase
7. Increase service volume



Clinical Engineering Track Chair, Dave Francoeur, introduces Dave Dickey (r).



**Biomed Bubba's my name,  
Electrical safety's my game**

Dickey encouraged all to sharpen their image. The Biomed Bubba (above) is a relic of the past. He represents the 1st and lowest

Level. The 2nd Level is the domain of the work code fanatics. Dickey urged that clinical engineers aspire to the 3rd Level where QA, Risk Management and control of vendors takes precedence to tracking down that stray electron lurking behind the relay.

## AFSMI Roundtable

*David F. Henault, [dhenault@afsmi.org](mailto:dhenault@afsmi.org)*

I really appreciated the opportunity to learn more about the needs and desires of the ACCE members attending the 17th Annual Northeastern Biomedical Symposium and enjoyed having the chance to share with several of your members more about AFSMI International, including the activities and benefits available for our members.

I would hope that having an open roundtable discussion like we had at the conference would be a first step in a continuous effort to find ways for AFSMI to help in the continued professional growth of executives, managers, professionals and aspiring managers. At present, AFSMI has a growing medical services membership which continues to learn from, and share with, members from the medical services industry, as well as from other aspects of service. In order for all of your members to learn more about AFSMI, I will be setting up an opportunity for them to access our Web page as members for three months.



Frank Painter, David Henault, Ray Zambuto and Joe Dyro (l. to r.)

*Editors note: Mr. Henault is Chief Executive Officer of American Field Service Managers International. We met at the above Symposium last month.*





## Clinical Engineering Profiles

**Dave Harrington:**

### Clinical Engineer, World Traveler

As with most clinical engineers of my age I took no formal courses in clinical engineering. Back when I was in college transistors were just coming into use. Most of my early work was with vacuum tubes, especially sound systems and ham radio. During and after college I spent several years playing hockey for a living. A great way to take out your hostilities. After some idiot threw a dime on the ice and my skate hit it going full speed up ice, the resulting train wreck resulted in a broken leg, forearm, jaw and cheek bone, torn ligaments in the knee, and three broken fingers. But I skated off the ice. After some 8 weeks in a hospital it became clear that the hockey days were over and it was time to use my education instead of my fists to earn a living. I wanted to teach and coach but the only position that I could find paid \$4,700 per year. The defense industry was looking for engineers and they were paying over \$5,500 per year, so I became an engineer. After several years of defense and early computer work, including the Datamation D8000 computer, a vacuum tube unit, I was asked to join a team working on the life support system for the lunar lander. After putting that design together I never went back to defense or computer work but got the bug for medical devices. In the mid-sixties a small company called Harvard Apparatus asked me to join them to develop fluid handling and physiological measuring devices, mostly for researchers. In the early seventies I thought that I knew enough to open my own company in healthcare technology. After a year of trying to get a new ventilator to market it was time to admit that I still had a lot to learn. The originator of patient monitoring, Electrodyne, was trying to bring out new devices and had the money to do some very nice engineering design. Once they were purchased by B-D it became apparent that no matter how good your ideas were you had to write out the business plans to get the funding. As with many engineers, business was not something that I knew a lot about. It became very clear that if I was to get ahead in the medical device business I needed training in business. So with three kids under eight and a mortgage it was back to school to get a masters in business.

While chasing the masters, it took me 7 years part time, I became friendly with people from the New England Medical Center who were also taking business courses as they thought that hospitals would become more business-like in the future. In 1975 the medical center decided to expand the engineering support at the hospital and I was asked to head it up. I fully expected to stay there 2 or 3 years and go back to the design work that I so enjoyed. Well 19 years later I retired, early I would like to add, from the medical center to do full time what I was doing as volunteer. That was the collection, rebuilding and shipment of surplus medical devices to hospitals and clinics in developing countries What started as getting rid of unused equipment in 1981 to an orphanage and hospital in Korea became my full time job 14 years later The hospital was very open to the volunteer work and allowed me to travel to many countries to install equipment or to teach the repair of equipment to the local engineers. Between 1984 and 1994 I got to over 30 countries, without getting

shot or sick. Since 1994 I have added only another 8 to 10 countries to the travel list.

Doing projects in the emerging world is one of the most rewarding things that a clinical engineer can do. To see what technology can do for healthcare where there was no technology really makes you proud of our profession. We are a very unique group of people that has contributed a tremendous amount by helping others both at home and around the world to live better by the correct utilization of technology In 1993 I had the privilege of doing an installation for Mother Teresa in Calcutta. Calcutta is a hot, dirty, smelly city with some 2,000,000 people living on the streets. Even under those conditions the hospitals and clinics were clean and the patients treated with compassion As we were finishing the installation Mother T came through to see what we had done. She asked me why I was doing this type of work and I said that I was looking for a shady spot in hell. With a smile she said, "you will know a lot of people there."



Mother Teresa and Dave Harrington

One problem with doing non-profit work is that it can be a financial drain. So after two plus years it was time to start making money so I could enjoy retirement whenever that comes. In November of 1996 I started a new company, SBT Technology, Inc., a combination consulting and sales organization in the international healthcare field. It also still works with non-profits to help them find good equipment and get it installed and the users trained. As with any new business, times are not always smooth but when I get discouraged I just think back to all the people that have been helped, all the people trained, and all the enjoyment I got from doing it. So I light another pipe, open a beer and continue to build the business.

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## Profiles: Dave Harrington

*continued from p. 9*

My life has been further blessed by my dear wife of 33 years, Dorothy, and my three sons. Sean is in orthopedics, Bryan in hospital computer systems, and Todd in pharmacy systems. All are married, out of the house and own property so they will not come back too quickly. Grandchildren are at 1.4 as Bryan's wife is expecting in April.



## ECRI and FDA Agree on Device Names

ECRI (Plymouth Meeting, PA) and FDA's Center for Devices and Radiological Health are harmonizing their separate medical device nomenclature systems. ECRI's system, known as the Universal Medical Device Nomenclature System (UMDNS), was adopted by the European Union to support the Medical Devices Directive and has been used in more than 40 countries for more than 15 years. FDA's system, used by industry to identify devices for premarket submissions and postmarketing reporting, is used by several nongovernmental organizations and the Canadian government

The two entities intend whenever possible to use a single term to refer to the same device in both systems. Otherwise, a cross-reference will be used to link terms for identical products. Each nomenclature system is used to identify, process, file, store, retrieve, and communicate data about medical devices. The unification of the two systems is a step toward international harmonization. For information on the agreement between ECRI and CDRH, contact ECRI at 610-825-6000.



## Retrospective

*George I. Johnston, johnstog@worldnet.att.net*

I met Paul W. Klipsch chairman of the board of Klipsch & Associates, Hope Arkansas, when he spoke at the IRE Section meeting in Portland, Oregon in the early 1960's. Paul, a well-known IEEE (formerly IRE) audio hi-fi speaker specialist, is a real character who also looks the part. He is a tall lanky fellow with a magnificent handlebar mustache, who, after being introduced, stood up, walked up to the stage, put one hand on the edge of the stage, and simply sprung up onto it. Paul was mustered out of the service at the end of WW II in Hope, Arkansas. The story goes that he used his mustering out pay to purchase a chicken ranch in Hope where he and his wife then lived in one of the coops until he was able to complete a house. From there he operated his speaker business even as he does today. He was an avid NRA member and forever a tinker. Paul's business manager told us the following story over dinner.

In the early sixties, for Christmas his wife gave him one of those Bulova Accutron watches that were being touted for their accuracy. Paul promptly started checking to see if it met spec and found it did not. So, back it went to Bulova in Massachusetts for correction. When it was returned, Paul checked again and again, but it failed to meet spec. After several more trips, Paul fabricated a special little transport box for his watch. Finally in exasperation one of Bulova's vice presidents wrote, "Dear Mr. Klipsch, You keep insisting your watch fails to meet Bulova's advertised accuracy specifications, how are you verifying this?" To which Paul replied: "Every morning when I get up I check it against WWV." The vice president's reply: "Dear Mr. Klipsch, You should know better than to trust a small southern radio station."

## ACCE Input Needed

*Dave Harrington, davesbt@kersur.net*

At the ACCE Annual Meeting in June, mention was made of the need for engineers to sit on AAMI standards committees. I am co-chair of the AAMI High Frequency Committee. Only two users are on the committee and none attended the meeting nor voted on the latest proposed standard changes. ACCE members, your input is needed and you should get involved. You should also regard the *ACCE News* as an excellent forum for reporting on standards activity in which you are involved.

The FDA is also looking for users to sit on advisory panels. I served on the GMP panel for four years. Panel members are paid and compensated for travel expenses. The FDA prefers applications for panel membership submitted by consumer organizations. As such an organization, ACCE is coordinating the submission of members' names to the FDA. Interested ACCE should members contact Tom Bauld, bauld@umich.edu, for further information. You may also query the FDA directly by contacting Ms. Annette Funn or Ms. Karen Springer at 301-827-5006; 301-443-9767 fax.

*Vol. 7, No. 6, 1997*



## ACCE Board Highlights

October 8, 1997

Jennifer C. Ott, Ottj@slucare1.sluh.edu

**President** Frank Painter reported on the agreement between the World Health Organization (WHO) and ACCE with regard to the publication of the WHO *Guidelines for Donation of Medical Equipment*. Since the publication draws heavily from the *ACCE Guidelines*, WHO has agreed to give credit of authorship to the appropriate sections of their document. Painter reported that because of low attendance at the MTM Conference in Orlando in November, the ACCE Advanced Clinical Workshop was canceled. Painter expressed his pleasure with the increase in membership yet urged the Board to continue their diligent efforts to encourage other clinical engineers to apply for membership. An ACCE editorial board has been created. **First Vice President** Jeff Secunda identified two educational projects for 1998, the First ACCE Symposium and the Teleconference Series. **Secretary** Jennifer Ott announced the distribution of the ACCE Membership Directory. Additional copies may be purchased from Morse Medical. **Beanie Baby Counter** Bryanne Patail reviewed the finances and presented the 1998 budget for review and adoption at the next Board Meeting in December. The Board unanimously approved the recommendation presented by Bill Betts, **Membership Committee Chairman**, of 16 new members and one fellow. The Committee is considering a Corporate Membership category. Tom O'Dea, **Advocacy Committee Chairman**, wants to increase committee membership beyond its present number of four. **Education Committee Chairman**, Jim Wear, announced plans for the 1998 Teleconference Series. He urged Board Members to suggest speakers for several slots that are still available. International Committee Chairman, Al Levenson reported an expression of interest in another Advanced Clinical Engineering Workshop in China. The role of ACCE as a resource for third-world governments was discussed. **ACCE News Editor**, Joe Dyro, is delighted with membership contribution of material to publish and is pleased that advertisers have realized the benefits of the *News*. **Webmeister**, Bruce Morgan, announced 4000 visits to the ACCE Home Page. Past President, Tom Bauld is directing a committee to consider the clinical engineering implications of the FDA GMP regulations. AAMI Liaison, Frank Painter reported that attendance at the AAMI midyear was dismally low. AAMI continues to consolidate its control of the certification process. The Board will meet next on December 10, 1997.



## Welcome to ACCE!

The Board unanimously approved the following recommendations of the Membership Committee:

### Individual

Bruce Andrews  
Britton Berek  
Mark Bruley  
James Capiello  
Don Conrad  
David Darnel  
Sudhakar Nagavalli  
Jay Patterson  
Saini Parvlinder Singh  
Michael Schwartz  
David Smith

### Associate

William Hyman  
Andrei Issakov  
Andrew Krivoshik  
Ira Lipson

### Candidate

Oscar Mislá-Villalba

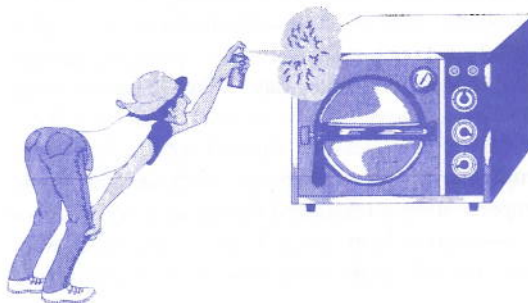
### Fellow

David Simmons

## Refurbished Medical Devices Get Trade Association

The International Association of Certified Equipment Refurbishers (IACER) was formed to assure prospective buyers of fair dealing by certifying the competence and business practices of its members. Frank Tuft, Marketing Director of Global Medical Network, Inc. has been named president of the new association. For further information, contact Frank Tuft (301) 639-6035 or frank@medical2u.com.

IACER 1707 W. Compton Blvd. Compton, CA 90220  
iacer@medical2u.com www.globalmedmall.com.





# ACCE News

## Field Clinical Engineer Wanted

Joseph F. Dyro, [jfdyro@aol.com](mailto:jfdyro@aol.com)

As is my habit, when I spot an advertisement for a clinical engineer I read it, not with the intent of finding a new job, but to see what employers are looking for in a candidate. The ACCE Advocacy Committee does this also in hopes of correcting misinformed employers whose **position open** does not match the **qualifications**, for example, *engineer - AS required*, or *BMET - Ph.D. required*. Recently an ad for a field clinical engineer caught my attention. To qualify one needed an RN So my friends, if your son or daughter or a friend or acquaintance asks your advice on what schools are strong in engineering and if they also like to garden, just tell them to go to nursing school and they can be a engineer working out in the field. Does this mean that to become a nurse one need only go to engineering school?



## Clinical Engineer Out Standing in Her Field

### Refurbish = Repaint?

Joseph F. Dyro, [jfdyro@aol.com](mailto:jfdyro@aol.com)

The plea was earnest. "Do something about it when you return to the States, Joe." That is the one request made to me by Miquel Cadena Méndez, President of SOMIB, the Mexican Society of Biomedical Engineering, and Chief of the Department of Electrical Engineering at the Universidad Autonoma Metropolitana - Iztapalapa. The dumping of defective medical devices in Mexico is a serious problem, as it is around the world. Dumping occurs when a device purported to be *refurbished* is sold to an unwary dealer or hospital in Mexico. These *refurbished* device companies are springing up like oyster mushrooms on a cool October day. The situation begs regulation. The FDA needs to move quickly to assure that the USA's highly regarded medical device industry doesn't get a black eye because of the unscrupulous business practices of those that would make a profit by misrepresenting a *repainted* device as a *refurbished* device. Will a trade association help? (See Trade Association story on p. 11) Perhaps. Time will tell. In the meantime - *Caveat Emptor*.

## Brazilians Publish

ACCE member Lúcio Flávio de Magalhães Brito, winner of the 1996 ACCE Advocacy Award for his publications promoting clinical engineering to hospital administrators and the health care community at large, continues to work tirelessly to advance the understanding of clinical engineering in Brazil. He, along with Victor Eduardo Mendes, authored a feature article entitled *A saúde vai às compras!* which appeared in the June 1997 issue of *Guia de Fornecedores Hospitalares*. The article emphasizes the critical role clinical engineers play in the planning, acquisition and implementation of



Lúcio Flávio de Magalhães Brito

medical device technologies. Also in 1997, Brito co-authored the book entitled *Seguranca Aplicada às Instalações Hospitalares*, Safety Applied to Hospital Installations, along with his brother Tales Rogério de Magalhães Brito and Celio Buganza. Published by SENAC, the leading Brazilian organization for the education of clinical engineers and biomedical equipment technicians, the text covers HVAC, infection control, medical devices, and fundamentals of physical measurements. Tales Brito also authored an article in the May 1997 issue of *Hospitalares* which was distributed at Hospitalar '97, the largest health care convention and exhibition in Brazil. *Validação de processos: Segurança e qualidade na esterilização de materiais*, *Process validation: Safety and quality in sterilization*.

## Advocacy Awards Deadline Approaching

*Tom O'Dea, Chairman of ACCE's Advocacy Committee wants to hear from you. Every year awards are made to the individuals who publish articles promoting clinical engineering. The pen is a powerful tool if properly wielded. Put pen to paper and tell your story.*



## Beacon Biosensor Symposium

ACCE founding member Joe Bronzino, is organizing the BEACON Biosensor Symposium, *Biosensor Development: Opportunities and Challenges*. This focused public forum for biosensor information exchange will be held on October 2, 1998, at Trinity College, Hartford, CT. The objective is to stimulate and encourage students, faculty, industrial colleagues and legislative leaders in the state of Connecticut to support and engage in biosensor-related activities. Clinical engineers will be particularly interested in biosensor development because of the profound change in diagnostic instrumentation they portend. The Symposium is supported by BEACON, a coalition of Connecticut universities, hospitals and other organizations formed to promote biomedical engineering (see story on BEACON in *ACCE News*, Vol. 7, No. 1). Dr. Bronzino is Professor of Biomedical Engineering at Trinity College, Hartford, CT. For more information contact Laurie Macfarlane at [laurie.macfarlane@trincoll.edu](mailto:laurie.macfarlane@trincoll.edu); 860-297-5364; or 860-297-5300 fax.



ACCE members meet to discuss Biosensor Symposium  
Bronzino (2nd from l) ponders the prediction of Bob Morris (r) that biosensors will eliminate hospital clinical laboratories. Mark Brody (l) and President Frank Painter add their perspectives.

## The View from the Penalty Box

David Harrington, [davesbt@kersur.net](mailto:davesbt@kersur.net)

In a very brief span of 35 days I observed and participated in the good the bad and the ugly of our profession. The good involved the participation in two regional biomed shows. The North Carolina show was very enjoyable as the mood was upbeat about the future, the vendors were happy and the conversations were very spirited. The Northeast Symposium, that I have attended for 17 straight years, also was very upbeat, even those that were recently "outsourced" were not bitter but looking forward to new challenges.

Also part of the good was a trip to Romania to install an intensive care unit at the hospital in Oradea. This was a very unique project as the equipment was all new, no used equipment at all. It had been donated by MDE and the system overwhelmed the staff. They were not expecting equipment of that caliber. The equipment that it replaced was designed and built in eastern Europe and was bouncing ball with the first trace moving left to right and the second trace right to left.

The bad was at a hospital in Cluj Romania. Here under a contract between the hospital, AIHA, and a hospital in the States an intensive care unit was "installed". The equipment, HP Merlin, was first quality but the installation was not done correctly. The central station was never wired in, there were missing modules and cables, and most importantly no documentation existed. Calls to the funding agency got no response as to why the unit was not correctly installed but only the comment that all the

funds were spent and that it was up to the hospital to correct the problem. What bothered me the most about this was the fact that the US hospital did not involve its clinical engineer and the funding agency did not fund the local engineers to do the job. The installation was done by a hospital administrator, a nurse trainer and a social worker. Basically they put the monitors at the bedsides, put the central on a shelf and left the country. Having worked for several years with the local engineers in Cluj it was apparent that they were very upset that the problems were left for them to solve without any budget. What really makes this bad, at least to me, is that our tax dollars are at work through government agencies. USAID spent over \$3 million on this affiliation and all the hospital has to show for it is a poorly installed system and a group of physicians and their families that got to go to Disney World on our taxes.

The ugly was the days I spent helping out a friend in a Boston hospital that had too much work and not enough people. Going back to a US clinical setting where the documentation is more important than what you do illustrated to me that our hospitals are losing their way. The staff spent more time on paper than on patients. If that trend keeps up the best health care system in the world is going to become second rate. Remember the patient comes first, not the paper work.

Maybe I have taken too many pucks to the head but to me the patient is always first.



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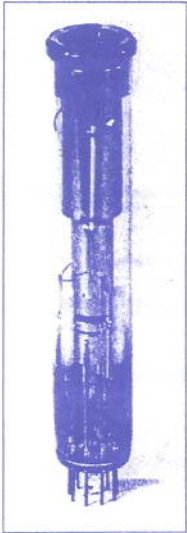
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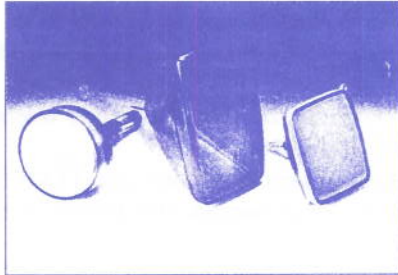
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## Calendar of Events

- American Society for Healthcare Engineering: 12th National Conference, Dec. 2-5, 1997, Chicago, IL. Contact: Patti Costello, One North Franklin, Chicago, IL 60606. Tel: 312-422-3807, fax: 312-422-4571.
- AIMBE Seventh Annual Event, "Bioengineering and Functional Genomics," February 28 - March 3, 1998, Washington Marriott Hotel and National Academy of Sciences, Washington, DC. Contact AIMBE 202-496-9660.
- IEEE Engineering in Medicine and Biology Society, Information Technology Applications in Biomedicine (ITAB '98), A 'Special-Topic' Conference of the EMB Society, Washington DC, May 16-17, 1998, Swamy Laxminarayan 609-419-0531, Ex: 203, 609-419-0530 fax, e-mail: swamy@nextgeninter.net
- American Medical Informatics Association, 1998 Spring Congress, Philadelphia, PA. Contact AMIA 301-657-1291.
- ACCE: First ACCE Symposium, May 30, 1998, Plymouth Meeting, PA. Contact Jennifer Ott 314-577-8018; 314-268-5178 fax; ottj@slucare1.sluh.edu
- AAMI 98: 33rd Annual Meeting and Exposition, May 30-June 3, 1998, Philadelphia, PA.
- ACCE Reception and Business Meeting, June 2, 1998, Philadelphia, PA. Contact Jennifer Ott 314-577-8018.
- Annual Meeting, American Society of Physicists in Medicine, Aug. 9-13, 1997, San Antonio, TX. Phone 301-209-3350.
- 18th Annual Northeastern Biomedical Symposium, Nov. 9-11, Albany, NY. Contact Ronald Hulin 518-525-1799; ibs98@aol.com

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