Special Double Issue

The September-October No. 5 and the November-December No. 6 Issues of the ACCE News have been combined in this special double issue.

INSIDE THIS ISSUE
△ ACEW Cape Town, p. 22
△ ACEW Russia p.12  △ Meetings p.4  △ On the Move and In the News p.8  △ FCC Telemetry Public Notice p.18
△ Penalty Box p.11  △ Election Results p. 9.

Cape Town
South Africa
Site of
ACCE Workshop

ACCE News
21 Bob's Lane  Setauket, NY 11733

Mr. Antonio Hernandez
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President’s Message
Jennifer C. Ott, MSBME, jennifer.ott@jenerstl.com

ACCE is again on the verge of greatness. Our organization has grown by leaps and bounds over the past few years. We have a strong and dedicated membership willing to keep clinical engineering in the forefront. The Board of Directors works diligently in hopes of achieving what the membership desires and continues to make ACCE a viable organization. WE NEED YOUR FEEDBACK! Thanks to all of you who attended the Annual Meeting this past June. Your support is greatly appreciated. There are many projects and activities we will be working on this year.

Clinical Engineering Certification

This could be one of the most important items ACCE has ever spearheaded. This was a hot topic at AAMI and Frank Painter has been making progress. ACCE has a committee in place and the ideas are still preliminary but opportunities exist which are being explored. Frank will keep us apprised of his progress.

HealthTech 2000

Bingseng Wang has graciously accepted the post of coordinating the ACCE track at HealthTech 2000. He is looking for members to chair sessions and participate. The 1999 program was a rousing success and generated income for ACCE as well as a discount to ACCE members who attended.

Please contact Bingseng with your ideas, support, and topic you would like to chair!

World Congress

The World Congress on Medical Physics and Biomedical Engineering will take place July 23 – 28, 2000 in Chicago. ACCE is a proud sponsor of this prestigious international event. We will be coordinating a workshop on the Acquisition of Medical Equipment and putting together the clinical engineering track. This event really solidifies our presence in the international community and relationship with other societies. Please contact Frank Painter or Sam Miller if you are interested in participating or attending. [frpainter@earthlink.net or samiller@localnet.com]

Advanced Clinical Engineering Workshops

ACCE has put on many Advanced Clinical Engineering Workshops. These are generally in the international community and require members to participate in terms of education. ACCE may receive monetary compensation but our coffers do not contribute because these are generally sponsored by PAHO, WHO, and other international organizations. What a great opportunity for interested members to travel the globe and educate fellow clinical engineers with minimal expense! If you are interested in participating and have subjects you are comfortable presenting please contact Bob Morris. [morris@ohsu.edu]

Vol. 9, Nos. 5-6, 1999
ACCE Symposium

Brian Porras pulled-off the 2nd ACCE Clinical Engineering Symposium without a hitch. This was our first endeavor with AAMI and assisting them in program development. This relationship continues to evolve and the 3rd ACCE Clinical Engineering Symposium is in the works. Similar to HealthTech this program looks to benefit the organization and membership with income and discounts. Brian will keep us informed of the progress with AAMI and the development of the topic: “Frequency Allocation Issues in Medical Telemetry – Avoiding a Repeat of Baylor”.

Teleconference Series

The 1999 Teleconference series is in full swing. This is a wonderful educational opportunity that is cost effective and benefits more than just clinical engineers. Many sites have invited other clinical and administrative staff to attend various topics. We all know healthcare is a team effort and our topics for 1999 emphasize this sentiment. There are four remaining: Electromagnetic Interference, Telemedicine, Critical Skills for the Successful Practice of Clinical Engineering and Technology Management, and ICAHO Update. Contact Jim Wear for information. [wearjam@lrm.va.gov]

Newsletter

Our newsletter continues to be timely, innovative, intriguing, and inspirational. If any of you have copy please forward it to Joe Dyro, our esteemed editor. Joe has done a great job in making our newsletter what it is today but he cannot succeed without our help.

Organizational Assistance

I will be working on obtaining assistance for ACCE in terms of general bookkeeping, membership tracking, communication, and other general activities that would benefit from a single source point of contact. Our organization has grown to the point that services may begin to suffer if we do not consider this issue. A proposal is being developed to be sent to potential sources of these skills.

Website Assistance

Our current website editor is undergoing some editing of his own and is unable to continue with the task at this time. This is an excellent way for you, the membership, to check on what is going on with ACCE and keep in touch with fellow members. If any of you have skills in website design and would like to help keep this tool viable please contact me. [Jennifer.Ott@tenetstl.com].

Many of you expressed an interest in participating in ACCE activities on the information update form sent with the 1999 ballots. I hope all of you were serious because we will be contacting you. I have mentioned many areas above that require assistance. Please let the appropriate people know.

Vol. 9, Nos. 5-6, 1999

started off this letter by stating ACCE is on the verge of greatness and we are. The items listed above only gloss the surface of the major projects ACCE is undertaking this year. The Board of Directors tries to do what is best for the organization and with the busy schedules we all keep it is up to all members to help contribute to the success of the organization. We can only be as successful as the constituents we represent and we have a wonderful membership. Please get involved!
Letters

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Morris Hits the Mark

Editor—In the July 1999 issue of the ACCE News, President Morris makes some interesting points about BMETs having an "identity problem." He then states, "Any activity or group that denigrates or does not recognize the key roles of BMETs, denigrates and fragments the professional identity of all. AAMI has also recognized the peril in denying one's working identity."

I agree. But, it is unfortunate that the ACCE through its Individual Member requirements does not recognize this peril and contributes to the fragmentation of the profession. Even a BMET who directs a department but does not meet the certification or BS requirements is relegated to Associate Member status unless some outstanding contribution to the field can be documented. As a member of the Membership Committee I know this to be true and further strongly believe that we have granted Individual Member status to consultants (for political reasons) who are about as remote from the real world clinical setting as the Man in the Moon. In many cases it is precisely because BMETs do not have an identity problem that keeps them from applying for ACCE membership which would relegate them to Associate Member when they know how they measure up to their peers.

I strongly urge the ACCE Board to review our membership categories and heed the words of Robert Morris.

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The Editor encourages readers to express their views by way of letters that might be printed here for the benefit of the readership. He also likes to get mail.

Meetings

RECENT CLINICAL ENGINEERING ACTIVITIES IN BRAZIL

Binseng Wang, binseng@voicenet.com

In parallel to the Hospitalar'99 equipment show in Sao Paulo, clinical engineers in Brazil conducted several activities during the period of June 22 to 26, 1999. Over 45,000 professionals from 25 countries visited the show. Clinical engineers made two presentations to physicians, hospital administrators, engineers, architects, and nurses at the show. Paulo Camargo, CCE, discussed the contribution of clinical engineers to the design of hospitals, in addition to the management of technology, during the 4th Latin American Congress on Healthcare Services. Participants included professionals from Argentina, Chile, Uruguay, Mexico, and Venezuela, in addition to many Brazilians. Binseng Wang, an ACCE member, discussed strategic planning and methods for determining the price for technology-based health services. About 50 persons attended each presentation.

On Thursday, June 24, the Brazilian Clinical Engineering Certification Committee (CBC) held its annual meeting with the presence of 12 persons, including 6 Committee members. A new certification campaign will be started next year, as there are many interested parties. Support is being obtained from hospitals, manufacturers, physicians, administrators, and nurses to provide more visibility and credibility to the certification process.

On Saturday, Binseng Wang led a workshop on Technology Management and Cost Control for nursing professionals at the SENAC Health Education Center in Sao Paulo. About 20 nurses from various states participated in this workshop. This workshop is part of a long-term effort by SENAC, under the bold leadership of Evanisa M. Arone, to help Brazilian nursing professionals learn better ways of managing technology and getting clinical engineers to interact with nurses.

In addition to the ACCE members mentioned above, the following members also participated in the activities: Eber R. dos Santos, Luíce F. Brito, Jose C. Cunha, and Marcio R.M. Serra. The ACCE International Committee brochure was distributed to all interested parties and was well received. Clinical engineering is clearly growing steadily in Brazil in spite of current economic challenges. Currently there are 350-450 persons practicing clinical engineering, but only 9 have been certified. Most of them have been working in private and non-profit hospitals for some
time, although there are some in manufacturing and after-sales support, promoting excellent integration among manufacturers, suppliers, and hospitals.

Refurbished Medical Equipment Exhibit
Mexico, City
October 19-21, 1999

George I. Johnston,
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In October 1999 I participated in what, to my knowledge, was the first ever exhibit focusing on refurbished ("pre-owned" not used) medical equipment sponsored by U.S. federal agencies. The exhibit was the first in a series sponsored by the FDA and the U.S. Department of Commerce. I attended wearing two hats, one as vice-president of TLC/MEDHEALTH INTERNATIONAL, INC. which paid my expenses, and the other as spokesman for the American College of Clinical Engineering. I distributed ACCE Brochures and informed attendees of ACCE international activities. I promoted the ACCE Guidelines for Medical Equipment Donations in a seminar entitled Do’s and Don’ts of Refurbished Equipment: What You Need to Know to Get the Best Deal in Quality and Cost. With her permission, I distributed copies of Mary Beth Hatem’s article From Regulation to Registration recently published in BI&T. This did much to clarify and define a variety of terminology used in relation to "pre-owned" medical equipment as well as introduce the proposed voluntary standards system developed by the AAMI Task Force on Voluntary Controls. This is of particular value to prospective purchasers of refurbished equipment in countries outside of the U.S. where maintenance is most often a problem. Allegedly refurbished medical equipment marketed in developing countries, which turns out to be defective or not as represented, may never be put into service for lack of in-country repair capability.

The meeting was a resounding success with 972 people attending the exhibits and 219 paying $30 each to attend the seminars. Dr. David Edwards, president of TLC/MEDHEALTH, INTERNATIONAL and ACCE Member, Adriana Velásquez, biomedical engineering coordinator for the Mexican Hospitals Association together provided organizational guidance to Rachel Polo, Project Manager in the U.S. Trade Center, Mexico City and organizer of the exhibit. Seminars were organized to focus on the importance of after sales maintenance, availability of maintenance parts and operating supplies, appropriateness to the local environment and cost effectiveness in that environment. Adriana also provided Ms. Polo with mailing list of persons most likely to be interested in attending the exhibit and seminars. She also was one of the speakers at the exhibitor’s opening morning breakfast with an excellent presentation What the Mexican Hospital Association Needs from Refurbished Medical Equipment Vendors. In her presentation, she stressed the need for equipment appropriateness and the availability of after sales maintenance service, parts and supplies.

Twelve exhibit booths offered a variety of refurbished medical equipment, each mostly concentrating on a single type product. Two vendors specialized in other services. TLC/MEDHEALTH INTERNATIONAL particularly stressed after sales service and its Medical Equipment Refurbishment Centers (MERC) concept. It is actively seeking an in-country medical equipment maintenance service to partner with and support its after sales warranty and repair service for products sold in Mexico. Once that is established the MERC can be implemented. Used medical equipment would be imported, tested and refurbished to original factory specification at considerably lower cost than in the U.S. prior to being offered for sale. It was my role to investigate existing ISO’s and evaluate their capabilities. I identified three (by virtue of their visiting our booth) and site visited each of them. One, SIRMEDENT, particularly impressed me for the following reasons:

1. Its staffing included several engineers and technicians with years of in-hospital maintenance and repair experience.

2. It used considerable ingenuity in overcoming difficulties in obtaining replacement parts and showed me several instances where they fabricated the required part from other locally available parts. An incubator heating element, for instance, was hand-formed from a standard Chromalox strip heater.

3. It understood and subscribed to test equipment annual calibration, traceable to the Mexico National Bureau of Standards, and had calibration labels on all their test equipment.

4. Although it was lacking in ownership of many specialized test equipment items it had arrangements with vendors of such equipment for loan. This apparently came about through its providing maintenance of that same specialized test equipment for the vendor. A working unit would be provided for comparison
This was what had infuriated the exhibitors presently surrounding Norman. I joined the group to listen to the discussion and heard Norman defending his position as only “…attempting to assure ethical standards for equipment purchases.” The other exhibitors allowed as how they were perfectly capable of maintaining ethical standards without IAMER’s assistance and that IAMER had no right to act as spokesman on behalf of all refurbished medical equipment marketers. It would seem there is a vacuum here in the secondary marketing area of refurbished medical equipment which IAMER through its trade association status and political contacts has been attempting to fill single handedly. The Code of Ethics document and membership on the AAMI Task Force on Voluntary Controls have helped its promotional efforts. AAMI and ACCE take note!

Morris in Estonia

Bob Morris, morris@ohsu.edu

On the way back to the States after the ACEW in Moscow and consulting in China, I stopped off in Tartu, Estonia. Al Jakniunas was to represent ACCE at a meeting to explore means for healthcare technology support in the Baltics. Unfortunately, Al took ill in Russia. Fortunately, I was able to juggle my schedule a bit to fill in for Al. What were one more stop and a few days anyway?

After Estonia, I got back to the USA at 0200 hours on 24 September after 26 hours of travel. There were several delays.

I think the trip to Estonia was successful. There was agreement to establish a Baltic Cooperative on Technology Support. They are looking forward to having an ACEW some time next Spring to be held in either Lithuania or Latvia. They will have a meeting in Helsinki in January to further organize.

I’m sorry Al Jakniunas could not be there. I am certain that his knowledge of Baltic culture would have been very helpful.

I have a copy of the agreement reach in Tartu and will mail it to anyone who requests and provides an address. A summary of the conclusions from the meeting is included below.

Health Technology Management Workshop in Tartu, Estonia

WHO proposed a pilot project in management of medical technology to the Baltic States. The proposal was discussed in a workshop in Tartu September 20-21, 1999.

The workshop was supported by WHO Headquarters in Geneva, WHO Collaborating Centre for Essential Technologies in Health, Nordmedtek, Ministry of Social Affairs and Health of Finland, International Federation of Medical Physics and Biomedical Engineering (IFMBE) and American College of Clinical Engineering (ACCE).

The countries of Estonia, Latvia, and Lithuania were present as the WHO pilot project owners. Minister of Social Affairs of Estonia Eiki Nestor sent a greeting to the workshop.

The following conclusions were reached:
1. The representatives of Estonia, Latvia and Lithuania stated the necessity of closer cooperation in the management of medical technology on the country and hospital level. The meeting accepted the WHO
proposal and decided to organize the proposed project.
2. The parties will together form a management group to plan and realize the project. Each country will nominate two members. The members will be nominated within one month of signing the document.
3. During the meeting the parties began cooperation in the following tasks:
   - management of medical technology
   - education and training
   - legislation
4. The organization of the project was also discussed.
5. The next meeting will be held in January 2000 in Helsinki, Finland.

**IFMBE-CED Report**

**Peter Heimann, pheimann@gondor.mrc.ac.za**

Baltic Countries are in the process of organizing their clinical engineering environment. I recently (last week) attended both the Advanced Clinical Engineering Workshop in Moscow (organized by the ACCE, WHO, the Russian Academy of Sciences and the Russian Medical Physics Association - under the auspices of the IFMBE-CED) and the Baltic Workshop on Clinical Engineering in Tartu, Estonia.

Both workshops were well organized and I recommended that...

Latvia, Lithuania and Estonia embark on establishing a regional clinical engineering society with the aim of direct links and membership to the IFMBE-CED. One of the main problems identified is that clinical engineers in that region have no representation (and thus say) within the medical physics environment in which they currently operate. There are about 120 clinical engineers and technicians in the region and clearly they are rather isolated. Their problems are definitely not unique and IFMBE-CED could be of great benefit and assistance in promoting their endeavors.

The ACCE will also be approached with the aim of organizing another workshop in that region under the umbrella of the IFMBE-CED. I am sure that IFMBE-CED will be able to support this process in one way or another.

The organization of the ACCE/AFTH/IFMBE workshop for Cape Town (November 1999) is progressing well and we have been able to finalize program, participants and budget. Funding currently covers 40 participants from the African Region and I will let you have the final program within the week.

We have also organized a workshop in Washington in November to identify standards and norms and indicators for health technology management and thus also clinical engineering.

I am rather happy with the progress of the clinical engineering component so far of the World Congress on Medical Physics and Biomedical Engineering in Chicago, July 23-28, 2000.

**New York City Metropolitan Area Clinical Engineering Directors Group**

*Ira Soller*

The New York City Metropolitan Area Clinical Engineering Directors Group, consists of Directors of Biomedical/ Clinical Engineering representing all of the major medical centers in the greater New York City area. The group holds biannual society membership status in AAMI.

At the Sept 21 meeting, hosted by ACCE Member Mr. Mike Miersky of St. Luke's - Roosevelt, Mr. Matt Sullivan of ISTAT, presented a lecture on "Point of Care Testing - Bringing Technology to the Bedside". Mr. Alan Martin of Siemens is the sponsor of the Nov. 9th meeting at which the latest "Technology Trends in Health Care" will be discussed.

A very interesting meeting dealing with "Intellectual Property" to be presented by Leonard Sorgi, Esq. of Amster, Rothstein & Ebenstein is scheduled for Jan. 25, 2000.

For information contact:
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What’s Life Like in Yellowknife, Canada?

Kevin_Taylor@ccmail.hlthss.gov.nt.ca

Ed. Note: Kevin Taylor recently moved from Boston to Yellowknife, Canada. Upon notifying the Chairman of the ACCE International Committee of which he is a member, Kevin received an inquiry from Chairman Sam Miller asking what prompted the move and what life was like in Yellowknife. Sam enjoyed reading the response and thought it might be appropriate for the ACCE News as a human-interest piece. Your Editor readily agreed.

Thanks (Sam) for linking me back up to the committee. There were a number of factors that initiated the move. One primary one was getting married. I am Canadian and so is my wife; however, she is a schoolteacher and specializes in teaching in Northern environments (i.e., specifically primary and ESL). It would have been difficult for her to get a job in the US and especially in Boston.

In addition, the position offered an opportunity that doesn’t happen to my generation of Clinical Engineers. Most specifically, I had the chance to build an Engineering-based program from more or less scratch. There is enough of an ECRI system here to pass accreditation but the shop is primarily a repair shop. I was always a little jealous of people like yourself, Bob Morris, Tony Easty, and George Johnston who got to build the original departments. In addition, there is rarely an opportunity in a Western country to work in the creation of a completely new State’s health system (well here it is a new Territory).

One area as a Clinical Engineer I found I was missing was also the business side of things. In-house departments are starting to shift more and more to that way of thinking. My first task here is to write a business plan to expand the service and the work with the hospital executives and ministry of health to implement it. Finally, the North offers elements of international environment - isolation, small health centers, high staff turnover, supply and manufacturer support difficulties. The international environment is primary passion but for someone with just five years of experience working in that environment is often difficult unless I find things myself and work myself into the right place at the right time. Doing that I can only afford about one international job a year. So this environment potentially offers the best of both worlds.

Anyway, you are correct, some places and some areas here are very secluded and primitive but I must admit I never liked big North American cities. The North has money, boys do it have money, and things can go from primitive to boom town in very short periods of time.

Ray Zambuto Elected to AMRF Board of Directors

The American Medical Resources Foundation (AMRF) announced the election of ACCE Member Raymond Zambuto to membership on the AMRF Board of Directors effective April 1999. Ray is well known in the medical and biomedical engineering community as the President and founder of Technology in Medicine, Inc., which provides biomedical engineering services to major hospitals throughout New England.

Ray Zambuto

Ray has served as an Affiliate Instructor of Biomedical Engineering, Worcester Polytechnic Institute, member of the National Committee on Shared Biomedical Engineering Services of the American Society for Healthcare Engineering, and Assistant Director, Medical Engineering Program, Massachusetts Hospital Association. He has served in numerous other healthcare associations and on committees involved

Vol. 9, Nos. 5-6, 1999
with medical engineering, shared biomedical services, and hospital safety. Prior to founding Technology in Medicine, Ray was a Senior Engineer at the Massachusetts General Hospital serving as project engineer in the development of specialized computers and data acquisition systems. Earlier, he was a biomedical engineer with the Lockheed Electronics Company, an engineering consultant at St. Vincent’s Hospital and Medical Center in New York City, and a National Institutes of Health Special Fellow. He holds a BSEE degree and an MS in Bio-Engineering from the Polytechnic Institute of Brooklyn (NY). Ray is a Fellow of the American Society for Healthcare Engineering and a member of the U.S. Board of Examiners for Clinical Engineering certification.

Bill Hyman Elected AIMBE College of Fellows Class of 2000

ACCE Member Bill Hyman has been elected to the Class of 2000 of the College of Fellows of the American Institute for Medical and Biological Engineering (AIMBE). Official indoctrination will occur at the AIMBE Annual Event in Washington, DC March 4, 2000. Dr. Hyman is Professor and Chair of the Texas A&M University Biomedical Engineering Program. A specialist in medical device system safety, Bill is a major contributor to biomedical education. As an active faculty member and administrator, he has significant research accomplishments in biomechanics and in medical device system safety including especially human factors and clinical engineering.

AIMBE requires that Fellows possess a demonstrable record of individual achievement in research, development, education, manufacturing, public service, technological leadership and/or clinical practice as they relate to medical and biological engineering.

Dyro Selected as Juror for Medical Design Excellence Awards 2000

Distinguished panel to evaluate medical products in third annual awards competition.

Canon Communications LLC, sponsor of the Medical Design Excellence Awards, has announced the appointment of Dr. Joseph F. Dyro to a distinguished panel of jurors that will evaluate entries in the third-annual competition, which recognizes the critical role of design and engineering in the efficacy, safety, and commercial success of medical products. Jurors will evaluate products on an established set of criteria which includes: aesthetics, form and function; end-user benefits to patients and healthcare professionals; technological advancement and innovation; and design factors that facilitate production while reducing overall costs. The ten-member panel represents a broad-spectrum of disciplines from medical device manufacturing, industrial design, human factors, engineering, medicine, nursing, product research and development, and academic institutions.

Dr. Dyro is President of the Biomedical Resource Group, a Setauket, NY-based engineering consultancy, specializing in biomechanics, clinical engineering, medical device design, electrical safety, and accident reconstruction. Dr. Dyro is a Professor of Biomedical Engineering at Touro College in Dix Hills, NY, and an Associate Professor of Anesthesiology at the State University of New York (SUNY) at Stony Brook. A Certified Clinical Engineer since 1976, Dr. Dyro is Editor of the Journal of Clinical Engineering. Previous positions include Director, Biomedical Engineering at SUNY Stony Brook, and Senior Biomedical Engineer at ECRI. He serves as a consultant to the FDA, the National Institutes of Health, Project Hope, and the World Bank. Dr. Dyro is a member of IEEE’s Engineering in Medicine and

Vol. 9, Nos. 5-6, 1999
ACCE News

Biology Society, the American Institute of Medical and Biological Engineering, the American College of Clinical Engineering, and other professional organizations. He is the author of more than 50 original articles, and writes book reviews, editorials and technical reports on medical devices for several publications. Additionally, he is a frequent speaker and guest lecturer at industry conferences, symposiums, and forums around the world. Dr. Dyro holds a BS degree in electrical engineering from the Massachusetts Institute of Technology, and MS and Ph.D. degrees in biomedical electronics engineering from the University of Pennsylvania.

Award winners will be announced at a special ceremony to be held during the 18th Annual Medical Design and Manufacturing East Conference and Exposition, June 5-8, 2000 at the Jacob Javits Convention Center in New York. The Medical Design Excellence Awards is the only program of its kind, and is part of Canon Communications' commitment to advancing the art and science of medical product development. Through its market-leading publications, professional conferences, and trade shows, Canon Communications keeps the worldwide medical equipment manufacturing industry abreast of the latest issues, developments, and emerging trends shaping the future of healthcare technology.

For more information on the Medical Design Excellence Awards, please contact Gretchen Hawley, Public Relations Coordinator, at CANON COMMUNICATIONS LLC, 11444 West Olympic Boulevard, Suite 900, Los Angeles, California 90064-1549 USA. Phone: 310-996-9447; Fax: 310-996-9499; Internet: www.mdeawards.com; e-mail: gretchen.hawley@cancom.com

Morris in Moscow Slammer

Arriving in a foreign land without proper documentation can have some dire consequences as ACCE Past President Bob Morris discovered when he attempted to enter Russia without a visa. Of course, a seasoned traveler as Bob wouldn't do such a thing. On assignment in China and unable to obtain his Russian visa in time for the ACEW in Moscow, Bob counted on his buddy Al Jakununas to pick up the visa for him at the Russian Embassy in Washington, DC. The plan was for Al to meet Bob at the Moscow airport upon Bob's arrival and hand him his visa. Al waited for Bob at Terminal 2 (flights arriving from the West). Bob arrived at Terminal 1 (flights arriving from the East). Ne'er the twain shall meet. No Al, no visa. Authorities threw Bob in the slammer, locked him up and booked him on the next flight back to Beijing. Hours later after scouring the airport the search party by chance spotted Bob peeping through his cell. Visa in hand, he was set free to teach at the Advanced Clinical Engineering Workshop.

In Memoriam
William E. "Bill" Buckley

We are saddened by the recent death of William E. Bill" Buckley, 47. Bill was chief engineer at the New England Baptist Hospital in Boston, a position he held for 20 years. He was quite active in international work volunteering countless hours for hospitals in many Third World countries. Bill met Mother Theresa in Calcutta when he was involved in setting up a cardiac care facility in one of the hospitals she used. Bill was a contributor to the ACCE News and often provided the Editor with valuable insight into issues of concern to the biomedical engineering community. He was an active member of the Medical Device Society of Massachusetts. He will be greatly missed by all of us.
Some months ago I was playing in an old-timers international hockey tournament and got to talk with some engineers from Germany who were in the tournament. One was involved with health care but not in a hospital. We started to compare notes on health care systems and even with very different backgrounds we shared the same views.

We both agreed that the advances in technology have greatly cut the cost of healthcare in almost every country. We both had knee surgery 30 years ago and spent weeks in the hospital and months getting back on skates. We also both had knee surgery 5 years ago and were back skating in less than a week. We started to list out other devices or techniques that have reduced the overall cost of healthcare while improving the results. It was amazing how many devices and techniques we accept as commonplace are less than 10-years old and are products of the minds of engineers.

Also playing in the tournament were physicians, lawyers and “bean counters” who thought that technology has contributed to the high cost of healthcare. We should have used our sticks to beat some sense into their thick heads but we tried to reason with them. We found that no amount of examples and logic could change their minds. One pointed out that a new clinical lab device purchase by a hospital on whose Board he sat cost over $200,000. We pointed out that that machine performed some 43 tests in less than five minutes, a feat which would have taken 10 to 20 technician-days to accomplish with the same results. Yet, all that he saw was the $200,000 capital cost not the $400,000 to $800,000 cost in labor and benefits had the tests been done the old way. The fact that the patient was treated faster and went back to work faster did not enter into their thinking.

The physicians came around to agreeing with the engineers after a while; but the lawyers and “bean counters” still wanted to blame technology for the cost of healthcare.

As our engineering colleague from Germany stated “engineers work to advance technology and apply the advances to helping people, but the lawyers and “bean counters” are afraid of anything new. My feeling is that the root cause of the differences between the professions lies in our training. Being technology-based we have always said “what if, why not, we can give it a try” while the liberal arts based professions seem to say, “why change”. We have to understand these differences so we can keep the advances in medicine going and not fall back upon “blood letting, tree bark and incantations.” The lawyers and “bean counters” take comfort in such cheap and familiar nostrum. Patients may die but the treatments are cheap.

Over that past years as I have travel around the world it has become quite clear that new technologies are in great demand. Unfortunately not every hospital is ready for all the new technology. Some are still at the level of deciding upon acquiring either water or electricity. But we as engineers are working to solve many of those problems. Members of the ACCE as we have traveled have worked on water projects, electrical generation, and sanitation systems along with heating, air handling and so many other facility problems. The strange part is that we avoid these problems in our home hospitals but work on them in other parts of the world. We know that for equipment to work the infrastructure has to be present. I salute all the ACCE members that have gone out, gotten their hands dirty and made a difference in the delivery of healthcare.

This is what separates us from the lawyers and “bean counters”. When we see a problem we try to solve it while the other professions form committees to study what has to be done. We know what needs to be done and we get it done. MORE POWER TO THE ENGINEERS.

In closing, I picked up only one penalty in the tournament and that was for boarding a lawyer. For those of you unfamiliar with this hockey term, boarding is taking more then two strides before putting a person into the sideboards. It cost me two minutes but it sure felt good.

Vol. 9, Nos. 5-6, 1999
ACCE News

Advanced Clinical Engineering Workshop in Russia

Joseph F. Dyro, ffdyro@aol.com

They came from Duvna and Kazan, from St. Petersburg and Novgorod, from Samara and Stavropol, even as far away as Vladivostok. Top level health care professionals joined their peers from Moscow at the Advanced Clinical Engineering Workshop in Svemgorod, a 200-acre estate just outside of the Russian capital. Established in the 18th century by a Russian prince, the estate named Snigiri (Snowbird) is now a retreat center. The cool clean air invigorated all. Some 40 participants learned from and exchanged experiences with top-level clinical engineers and health care technology managers.

The ACEW was organized by the American College of Clinical Engineering, Association of Medical Physicists of Russia, Ministry of Health of the Russian Federation, Russian Academy of Medical Sciences and the World Health Organization, in association with the International Federation for Medical and Biological Engineering and International Federation of Hospital Engineering and co-sponsored by the American International Health Alliance, Oregon Health Sciences University, Swiss Tropic Institute, and the World Bank.

The theme of the ACEW was Effective Planning, Acquisition and Utilization of Healthcare Technology. The ACEW faculty, led by Yadin David, ACEW Program Chairman, comprised Bob Morris, Al Jakiniunas, Jim Wear, Frank Painter, and Joe Dyro. Andrei Issakov, an ACEW member and Team Coordinator, Department of Health Services Delivery World Health Organization (WHO), was instrumental in arranging the Workshop. Other faculty members included Peter Heimann, Cape Town, South Africa, Director of Technology and Business Development Group Medical Research Council and President of the International Federation of Medical and Biological Engineering Clinical Engineering Division, Martin Raab of the Swiss Tropical Institute. Russian faculty members included Valery A. Kostylev, President of the Association of Medical Physicists of Russian (AMPR), Oleg Shereshevskiy, AMPR Director of International Projects, Nikolai N. Blinov (AMPR), Alexander N. Varin (AMPR), and Vladimir Klimanov. Kostylev and Shereshevskiy were Workshop coordinators. Special thanks go to Ludmila Alexeeva, Sergei Varzar, Natalia, Olga, Galina, and Irina who handled all the local details, photocopying, taxi service, tourism and administration. Irina Dubovskaya and Victoria Droganova admirably translated the formal lectures and the often-spirited discussion.

Opening the Workshop, Dr. Andrei Issakov reminded all that this day was the national day of mourning for those killed and injured in the recent bomb blasts in Moscow and asked for a moment of silence to reflect on this tragedy. Opening and welcoming remarks continued with Bob Morris (ACCE), Valery Kostylev (AMPR), Peter Heimann (IFMBE), and Prof. Martinoff of the Ministry of Health of the Russian Federation.

Yadin David gave an overview of the Workshop highlighting the presentations that were to follow and introduced all of the faculty members, each said a few words of introduction. He then made the first presentation: Healthcare Technology and Healthcare Technical Services. This was followed by Heimann and Issakov presenting WHO Guidelines on Formulating National Healthcare Technology Policy. The first web-based streaming audio biomedical engineering lecture on the management of medical technology was offered by Yadin David. David also introduced the English and Russian versions of the manual he authored on Y2K Issues and Medical Equipment. A Y2K Issues panel discussion with David, Painter, Morris and Dyro concluded the day.

The next day began with Blinov and Equipping Clinics with Modern Means of Medical Imaging: Problems of Organization and Management of Diagnostic Centers. Varin continued with The Prospects of Equipping Medical Institutions with Domestically produced Equipment. Raab related Clinical Engineering Experiences in

Vol. 9, Nos. 5-6. 1999

Painter led the fourth day with Determining Workloads and Service Marketing. From Vladivostok where he is Deputy Chief of Physics Vladimir Klimanov described his experiences with imported equipment and highlighted the need to allocate special funds for maintenance and spare parts. Fortunately through a partnership with the Medical College of Virginia new diagnostic radiographic equipment has been installed. Wear and Dyro tackled Human Resource Development. Dyro concluded with Safety and Risk Management and Accident/Incident Investigation.

On the final day, Painter addressed Quality Assurance. Joined by Morris and Wear, he followed with a panel discussion on Utility Systems. Dyro has skyrocketed while production of domestic devices has plummeted. With the closing of military factories, many military engineers are available for work in medicine. A system of medical device standards has been difficult to implement. Some participants felt that the government could take more initiative in fostering the development of the domestic medical device industry. Some despaired at the prospect of not ever being able to compete with Western companies in the healthcare technology arena. One participant felt that government involvement with centralized purchasing is a necessity but that organization should begin today without waiting for government and Ministry of Health (MoH) initiative.

A common lament expressed was the ability to acquire high-quality Western diagnostic imaging devices but the inability to financially support the operating costs. While medical physicists are regulated, enforcement of these regulations leaves something to be desired. The chief physician of a medical diagnostic center urged the improvement of the quality of medical engineering personnel and stressed the importance of certification programs. He went on to state, "MDs, clinical engineers and financial managers must work together closely." He noted the widening gap between technological developments worldwide and the credentialing of physicians in Russia. Physicians desire more modern equipment to improve their credentials. Often equipment is underutilized or improperly utilized for a lack of physician training.

Counterproductive competition among medical specialties in Russian hospitals exists but some hospitals enjoy a high level of teamwork and cooperation. Utility problems are severe in several places. Problems include poor quality of electrical power and electromagnetic interference. A debate ensued over whether hospitals closer to Moscow received more financial assistance from the central government. Another participant after hearing the presentations declared that his hospital needed clinical engineers. He realized

Vol. 9, Nos. 5-6, 1999
the value of forming consortiums to share resources, which would include clinical engineering. A Director of Finance remarked, “We need to ask why high-tech is needed to the exclusion of mid- and low-tech and perhaps more appropriate technology.”

Martin Raab saw three steps that must be taken. First, centers of excellence needed in Russia at different levels with reference materials in the Russian language adapted to the Russian environment. Second, increased interest at the federal level is needed. He perceived a vacuum existing where nobody knows where to attach the knowledge imparted during such events as the ACEW. And third, concrete solutions and models need to be developed.

After the lively, substantive, and illuminating open discussion, David provided a Summary of Workshop Goals, Objectives and Conclusions. The ACEW closed with the presentation of Certificates of Recognition and Achievement to ACEW faculty and participants.

The Workshop strategy was first to present the most theoretical approach to technology management and then as the week progressed to present concrete examples of methodology and practice. Rather than “preaching to the choir,” the clinical engineering faculty held economists, finance directors, medical

directors, and hospital directors in rapt attention throughout their presentations. All in attendance recognized the enormous financial impact clinical engineering principles have on health care delivery systems. A great deal of information was transferred both in the spoken and written word. Contacts and networking were established. Reprints, slides, overheads, outlines were left behind for reproduction and dissemination in Russia.

The Journal of Clinical Engineering sent copies of the Journal for each participant as well as copies of The Guide to Biomedical Standards. Thanks go to the Journal’s Jack Bruggeman, Tim Baker and Joyce Meals who approved and facilitated the shipment of these workshop materials. Commitments to develop papers based on the Russian experience were obtained.

Membership applications to ACEE were distributed to those who requested them. ACEE looks forward to adding colleagues in Russia to the ACEE membership roll. The co-coordinators of the Workshop, Oleg Shereshhevskiy and Valery Kostylev will examine the articles of incorporation and organizational history of ACEE as an aid in the formation of a similar organization in Russia. Similar consultations have facilitated the establishment of national clinical engineering organizations in other countries such as Italy, Mexico, Brazil and Saudi Arabia.

Andrei Issakov thanking the ACEE faculty for their considerable effort in enduring the rigors of foreign travel with its many vicissitudes remarked that it was all worth while. The feedback he has received confirmed that the faculty did an admirable job to plant and water the seed of clinical engineering and technology management in Russia through state-of-the-art lectures, stimulating discussions, formal and informal exchanges which opened the eyes of many participants on many issues. Now, technology management and clinical engineering will be put on the agenda of health authorities and health professionals in Russia. He urged that the momentum created be maintained, particularly through the implementation of recommendations and
ACCE News

action points drafted by the ACCE team and Workshop Co-coordinators, Kostylev and Shereshevsky.

ACCE Workshop Chairman Yadin David wholeheartedly agreeing with Issakov summarized in the following statement the challenges and opportunities arising from the ACEW in Moscow:

"We all know that every day the challenge of meeting national health care needs with limited public and private resources is being played out in hospitals, clinics, physician offices, and homes across every nation around the world. We are all members of societies that are experiencing a change. A change in lifestyle, in social values, in economic rewards, in political participation, in globalization of relationships, and in our relative dependence and reliance on each other. Perhaps, the most significant changes are those associated with the rate of knowledge creation, transfer, and the rapid diffusion of technological tools. While we are different on the average most of us expect today more and better than yesterday, better commodities, service, healthcare, and the like.

On a national level, continuous learning, knowledge sharing, adoption of management skills, and networking that are supported by infrastructure and accepted standards are becoming the new national treasures. A healthy and educated workforce is a national treasure. Therefore, the national investment in effective and efficient healthcare delivery system is now paramount more than ever before. An inadequate healthcare delivery system directly impacts the national ability to grow, to compete and to advance. Legislative agenda conducive to the promotion of medical effectiveness through resource allocation and favorable reimbursement policy is the starting point. Investments in research and in healthcare industrial developments will contribute toward the creation of better services and programs.

We should be prepared to continue to lead this evolution through careful analysis of lessons learned from various global conditions and time. Careful analysis will tell us if we can adopt part or the entire lesson learned. The WHO and ACEW faculty are the ones that can illustrate the impact of a change, however it is up to the "locals" to determine if or what may be adaptable into their conditions and desires. To be able to effectively perform this task, we need to measure existing conditions with a frank mind, and have the skills and the perseverance to conduct this effort and the determination to implement it.

WHO and the ACEW faculty started the parade marching down the path. Let us hope that many will be recruited to follow on this path. There are some risks as not only success is in front of us but unfortunately some disappointments. It is the overall goal, of improving the healthcare delivery system that will be reached only with bold and persistent leadership".

The following points were formulated:

1. Translate Workshop presentations and handouts into Russian;
2. Organize regional seminars in the Russian Federation reiterating and enhancing the substance of the 1999 ACEW in Moscow;
3. Hold another ACEW in 2001 and biannually thereafter in the Russian Federation;
4. Compile examples of cost effectiveness of technology management efforts in the Russian Federation;
5. Assess the current conditions of the healthcare facilities and technologies in the Russian Federation and plan for the future from that basis; and
6. Create a healthcare technology management track at the university level and incorporate ACEW distance learning programs to train healthcare professionals.

The above proposal will not differ significantly when applied to other countries in the world that are in need of establishing and developing the principles promulgated by way of the ACEW.

All work and no play make Jack a dull boy. Receptions at both the opening and closing ceremonies afforded the opportunity to sample fine Russian food and drink. The staff of the conference center prepared delicious meals each day. This author was particularly fond of the many dishes prepared with mushrooms gathered from the surrounding woods. During the week, after the formal presentations and dinner, discussions would carry late into the evening in the fireplace room. One
special evening, we left the warmth of the blazing hearth to enter the 230 °F heat blast of a nearby sauna. Birch branches and leaves produce not only tactile stimulation but delight the olfactory senses with their sweet fragrance. Snow had not yet come to Snigiri, so we had to settle for dips in the pool to bring our body temperature to normal.

Side trips to downtown Moscow and a nearby monastery provided a glimpse of that great country’s splendors. The icy wind whipping over the Moscow River and through Red Square chilled the body to the bone and greatly increased the sales of fur caps proffered by peddlers swarming about the crowd. We delighted in the beauty of the Cathedral of the Protecting Veil of the Mother of God, St. Basil’s Cathedral, the Resurrection Gates, and the Cathedral of the Kazan Icon of the Mother of God. That evening at an ancient hunting lodge, bedecked with the usual animal skins, Cossacks keep close watch to keep the vodka and kvass glasses filled to the top. A sumptuous buffet preceded entrees, which included grouse, bear, rabbit, venison and a variety of local freshwater fish. Later in the week several faculty members visited St. Sergius Lavra, the monastery and residence of the Patriarch of the Russian Orthodox Church. Much evidence was seen of the reconstruction of the significant architectural treasures of Russia. The usual matroshkas (nested hand-painted wooden dolls), lacquered boxes, postcards and fur caps were purchased before boarding the van for the ride back to Snigiri through pastoral beauty and dark, pine forests highlighted by white birches brilliant against the setting sun.

While most of the faculty arrived at Moscow’s Sheremetyevo Airport without incident, Bob Morris managed to find himself in the airport jail, booked on the next flight back to Mongolia. His entry visa to Russia was to have been handed to him upon his arrival since it was issued in the Washington, DC, Russian Embassy too late for it to reach Bob in Mongolia. Al Jakniunas with visa in hand waited patiently for Bob’s arrival at Terminal 1. It wasn’t until he realized that flights from the east arrived at Terminal 2 that Al and Sergei Varzar scampered over and serendipitously found a bemused Bob in the lockup. Eventually Bob was sprung and on his way to Sverigorod. After the ACEW the faculty scattered to all points of the compass: Switzerland, Bulgaria, Estonia, France, South Africa and the USA. Painter and Dyro’s way to Airport was interrupted as traffic police stopped and searched the van. At that time throughout Moscow, no van escaped the scrutiny of the police ever vigilant in the face of terrorist activity.

"Let there be no doubt as to the high quality of medical care available in Russia", remarked Al Jakniunas. A bad champignon, perhaps, on an Air France flight disagreed with Al. Discomfort rapidly worsened. Were it not for the timely intervention of Dr. Sergei Barsukov, who was a Workshop participant, this would have been Al’s last Workshop. Dr. Barsukov is Deputy Chief of the A. Vishnevsky Central Clinical Hospital, Ministry of Defense of the Russian Federation (MoD RF). Six hours of emergency abdominal surgery and a two-week stay in the Intensive Care Unit did the trick. Al, recuperating in a VIP suite, reported that doctors, nurses and technicians who provided the best quality of care imaginable, treated him like a five-star general. He especially thanks his surgeon, Dr. Valery K. Zuyev, Deputy Chief Surgeon, MoD.
RF, and Chief Surgeon of the Hospital for saving his life. Valery, Natalia and Ludmila visited with flowers, chocolates and smiles to buoy General AI's spirits. Dr. V.K. Belyakov, General Director of the International Telemedicine Center in Russia, played a substantive role in keeping AI's spirits up. Dr. Belyakov's Telemedicine Center has evolved with the help of consultation from Yadin David. He brought magazines (in English), water and fresh fruits to AI while he was hospitalized and maintained communication among AI, his family, and Dr. David. It was truly good fortune to have Dr. Belyakov and his interpreter Alexander Zabolotsky present at such a critical time. Representatives of the U.S. State Department at the behest of Yadin David visited with more flowers and chocolates and facilitated the necessary arrangements for an extended stay and expedient transfer to a homebound flight. AI, fit as a fiddle, is now back to work at Howard University Hospital.

ACEW is a volunteer humanitarian effort of individual members of ACCE. Support is not derived from membership dues. On the contrary, ACCE receives funds for its endorsement of workshops, seminars and conferences. Immediate future ACEWs are scheduled for Cape Town, South Africa and the Dominican Republic. Contact Jim Wear (wearjames@hotmail.com), ACCE Education Committee Chairman, with an expression of interest in this challenging and rewarding experience. ACEW is one of several services offered worldwide by ACCE through its International Committee. Other services include technical training of clinical engineering staff for the acquisition and support of medical surgical and radiological equipment and the development of long-term equipment strategic plans.

Calling All ACCE Members
ACEW Faculty Members Needed
ACCE Advanced Clinical Engineering Workshops will continue to be given around the world. We would like to involve as many of our membership as possible in this rewarding experience. If you are interested please contact Bob Morris at morris@ohsu.edu or call him at 503-494-8420 or fax at 503-775-8457.
Federal Communications Commission
445 12th St., S.W.
Washington, D.C. 20554

DA 99-2244
Released: October 20, 1999

Office of Engineering and Technology Requests Information on Medical Telemetry Equipment Operating in the 450-460 MHz Band

The Office of Engineering and Technology is asking parties operating medical telemetry equipment in the 450-460 MHz band to assist the Commission by providing certain information on their operation. It is requested that users of wireless medical telemetry equipment operating in this band provide information on the numbers, types, locations, and frequencies of equipment presently in use. Parties are asked to submit this information to the Chief, Office of Engineering and Technology by January 31, 2000. The requested information will aid the Commission in determining whether it is feasible to lift the currently effective freeze on the filing of Part 90 applications for high-power operation in the 450-460 MHz band on the 12.5 kHz offset channels without adversely affecting existing medical telemetry operations.

Medical telemetry equipment is used in hospitals and health care facilities to transmit patient measurement data, such as pulse and respiration rates, to a nearby receiver. Part 90 of the Commission's rules permits medical telemetry equipment to operate on a secondary basis to land mobile users in the 450-470 MHz band. Hospitals and health care facilities holding a valid license to operate a radio station under Part 90 may operate medical telemetry equipment without any specific authorization from the Commission (see 47 C.F.R. § 90.267). As a consequence, the Commission does not have any records concerning the locations of medical telemetry operations in the 450-470 MHz band.


Medical telemetry equipment operates in the 450-470 MHz band on channels offset 12.5 kHz from regularly assignable channels under the old channelization plan ("12.5 kHz offset channels"). The maximum operating power for this equipment is substantially less than that authorized for primary users of the band. The channel separation and low-power operation minimize the possibility of interference received from, or caused to, primary users of the band. However, under the new channeling scheme, high-power primary users of the band would be able to operate on the same frequencies used for medical telemetry equipment.
This could possibly result in interference to medical telemetry equipment. For this reason, on August 11, 1995, the Commission placed a freeze on the filing of applications for high power operation in the 450-470 MHz band on the 12.5 kHz offset channels. See the Public Notice, "Freeze on the Filing of High Power Applications for 12.5 kHz Offset Channels in the 450-470 MHz Band," DA 95-1171, <www.fcc.gov/Bureaus/Wireless/Public_Notices/1995/da951771.txt>. The freeze remains in effect pending the development of a channel utilization plan that will protect low power operation on the 12.5 kHz offset channels.

The Commission expects medical telemetry equipment ultimately to migrate out of the PLMRS bands and into new bands allocated for medical telemetry. The Commission recently proposed rules to allocate frequencies where medical telemetry equipment can operate on a primary basis. See the Notice of Proposed Rule Making in ET Docket 99-255, FCC 99-182, released July 16, 1999 <www.fcc.gov/oet/dockets/et99-255/>. While this would be a long term solution to the problem of PLMRS interference to medical telemetry equipment, the Commission may be able take action in the near term to partially lift the freeze on high power applications on the offset channels.

The Commission's records of manufacturers' equipment authorizations show that the majority of medical telemetry equipment authorized for use under Part 90 (47 C.F.R. Part 90) is authorized only for the 460-470 MHz portion of the 450-470 MHz band. Further, prior to the radio service consolidation in the Second Report and Order in PR Docket 92-235, the only "Industrial Radio Services" spectrum available to hospitals and health care facilities were frequencies allocated to the old Business Radio Service. There were very few frequencies in the 450-460 MHz band allocated to that service. For these reasons, it may be possible to lift the freeze on applications for high power operation on the 12.5 kHz offset channels in the 450-460 MHz band. Before doing so, however, the Commission wants to ensure that interference will not be caused to medical telemetry equipment in that band. Accordingly, we are requesting that parties operating medical telemetry equipment in the 450-460 MHz band provide certain information on their operation to the Commission's Office of Engineering and Technology. The filing of this information is strictly voluntary, but parties should note that providing it could help prevent serious interference problems in the future. Parties may want to check with the manufacturer of their equipment to determine the operating frequency.

We are asking for the following information:

1. The name and address of the institution operating the equipment, along with the name, telephone number and e-mail address of a contact person there.
2. The number and types of devices being operated in the 450-460 MHz band, including the make, model number, FCC identification number, age, and type of equipment (e.g., heart rate monitor), and total number of channels of medical telemetry used in the facility.
3. The operating frequencies and RF output power of these devices.
4. The geographic coordinates of the institution, if known.
5. Whether the equipment could be re-tuned to operate in the 460-470 MHz band and, if so, the time period required for such re-tuning and the estimated expense of re-tuning that would be incurred by the institution operating the equipment.

Parties are asked to respond to the following address by January 31, 2000.

Chief, Office of Engineering and Technology
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

For further information about this notice, please contact Hugh L. Van Tuyl at: (202) 418-7506, email: hvantuyl@fcc.gov.
ACCE Board Highlights
Wednesday, August 18, 1999
Caroline Campbell, cac1@mgh.edu

Present: J Ott, B Porras, H Montenegro, B Patalil, T Cohen, V DeFrancesco, G Evans, B Morris, C Campbell, J Wear, B Wang, F Painter, J McClain

Excused: K Galanopoulos, T O'Dea, S Miller, J Dyro, B Morgan

Minutes of the Last Board Meeting (J Ott): The minutes were unanimously approved.

Officer Reports

Past President's Report (B Morris)

• There has been much activity related to the CCE process and ACCE’s interest. This will be discussed by Frank later in the meeting. The petition for a National Biomed Week is still progressing. Issues regarding wording still exist but the discussion has taken place and we will have to wait to see what happens. There is a movement to form a BMET organization because of the anger regarding AAMI’s lack of direct support with the petition. We will have to wait to see how this transpires.

President’s Report (J Ott)

• Collection of information to develop a Secretariat proposal is still being worked on. Treasurer information is forthcoming. Once the information has been collected it will be pared down and submitted to ECRI for a bid. We are at the point in our organization that assistance with basic bookkeeping and other functions will relieve some of the burden experienced. The Board will circulate the proposal for approval once available.

• George Johnston has submitted a request to have ACCE sponsor a Refurbished Medical Equipment Workshop this October in Mexico. TLC/MEDHEALTH has requested his assistance in coordinating this on behalf of the U.S. Dept. of Commerce out of Mexico City. Antonio Hernandez and Adriana Velásquez will also be participating. All are ACCE members and the workshop would be co-sponsored by ACCE, PAHO, and TLC. George will be locating the ACCE Medical Equipment Donation Guidebook to bring along to potentially generate revenue. Monetary sponsorship is not available, as there is no fee charged for the attendees. The Board needs to approve this sponsorship.

ACCE Board of Directors unanimously approved sponsorship of the Refurbished Medical Equipment Workshop this October in Mexico City.

• Some ACCE members have circulated an Internet website article taken from a speech by Dr. Lawrence. It discussed safety in the medical environment and compared it to strides made in the aviation industry. Al Jakniunas suggested generating a white paper on clinical engineering activities that could be submitted to Dr. Lawrence. Al, Bob Morris, George Johnston, Marvin Shepherd are discussing the idea. Ira Soller was suggested as well because of his wonderful chapter, which received an advocacy award this year.

ACTION: Anyone who may be interested in helping can contact Al Jakniunas at ajakniunas@huhosp.org.

• There has been interest in the past to complete a membership survey so that we as a Board can determine is we are doing what our membership desires. This may be a project we tackle this year.

• Bob Morris has begun working on a speaker database including resume’s and topics of interest. ACCE receives requests to develop workshops or participate in conferences and such a database would prove useful in planning these events.

ACTION: If you have an interest in traveling the globe or participating locally send your resume or CV with a list of topics you like to present to Bob Morris.

• Our Teleconference series has always done quite well. However, this is potentially an untapped resource, which we can share with others. Discussions have taken place in providing Jim Wear assistance in developing promotional materials, mailing lists, working with larger organizations such as ECRI, AAMI, or ASHE in further developing the product. One suggestion was to have the evaluation and sign-up sheet combined so that feedback is more consistently received. The topics presented often are not solely of interest to clinical engineers and could provide an opportunity for many organizations to invite other staff members to participate.

ACTION: Anyone interested in providing assistance in developing this wonderful topic should contact Jennifer.

• Many of you can see from our financial statement that our meeting expenses are generally the largest cost. We have previously tried to solicit sponsorship to offset this cost but it has been difficult to organize and collect. This is a good project, which has direct benefit to our bottom line.

ACTION: Anyone interested in spearheading the sponsorship collection should contact Jennifer.

First Vice President’s Report (B Patalil)

• The AAMI 2000 Midyear project is underway with a co-sponsorship between ACCE and MSCE. Tom Baud was appointed as the ACCE representative and we have 18 months of preparation. Members will put together the program. This has the potential to be the biggest Midyear event.

• The biggest project to be tackled is resurrecting the Vision 2000 program. This will require business plans to make programs self-sustaining and eventually break-even and potentially make a profit.

ACTION: B Patalil to review past Vision 2000 documentation and determine progress ACCE can make.

Second Vice President’s Report (B Porras)

• Second Symposium results are available from AAMI. Efforts related to the 2nd Symposium have resulted in initiating a new spirit of cooperation between ACCE and AAMI.

• Telemetry has tentatively been accepted as the topic for the 3rd Symposium to be held at the AAMI annual meeting in San Jose next June. ACCE’s approach relative to the Symposium contract with AAMI is to be a little more aggressive in gaining more concessions from AAMI, i.e. honorarium, registration concessions. AAMI will respond to ACCE’s proposed contract changes next week.

Vol. 9, Nos. 5-6, 1999
Morse ACCE wants a listing of products. Medical Liaison-Products: Wayne is looking for more direction from ACCE. Brian Porras will be Wayne’s liaison.

ACTION: Brian will distribute product listing to Board for comment.

Past Secretary’s Report (Jennifer Ott)
- Directory still requires updating. Cost of printing the directory is about $250.
- Files will be shipped to Caroline in the next few days.

Secretary’s Report (C Campbell)
- The FCC has issued a Notice of Proposed Ruling regarding dedicated spectrum for medical telemetry. The Board approved that Caroline and David Paperman would prepare comments on that NPR on behalf of ACCE. These comments will be reviewed and signed by Jennifer prior to submission to the FCC.

Treasurer’s Report (H Montenegro)
- Henry will work with Bryanne to get up to speed.

Past Treasurer’s Report (B Patali)
- P&L Review: ACCE is ahead of budget because of past due memberships dues received & increased advertising revenue.
- Change of Files: pending.

ACTION: Bob Morris will send electronic copy of stationary to board members.

Committee Reports

Membership (J Ott for K Galanopoulos)
- New members proposed include: Fellow Membership: Bob Morris; Individual Membership: Nicholas Cram, Joseph A. Dohle, Thomas E. Primiano-Holton, Joseph Skochdopole, Henry Stankiewicz, Jr., Kathleen Zaverton; Change from Candidate to Individual Membership: Vinnie DeFrancesco; Candidate Membership: Izabella Anna Gieras; Associate Membership: Bassam Said Atta

ACCE Board of Directors unanimously approved the new members and status changes.
- K Galanopoulos has tried to contact Steve Wexler and Bob Stiefel numerous times without success. We are looking to award these individuals memberships for calendar year 2000 in honor of the Devteq award so we have a little time.
- K Galanopoulos and the Membership Committee are still reviewing other members who have requested status changes. These will be reported next meeting.
- J Ott expressed an interest in modifying the application form to better follow the database input format, include check boxes to indicate interest in committee or board membership, or meeting assistance. This modified application should be sent to the Website, Newsletter, Board Members and other ACCE members who routinely solicit applications.
- K Galanopoulos expressed a concern that resume or CV’s were not being sent with applications, which is slowing the process down. This may also be modified on the application form.

Education Committee (J Wear)
1999 Conference Schedule & Registration: 10-13 sites (about half of the sites are not from ACCE members). Total income about $10k.

Promotion
International Committee (S Miller)
- Financial Assistance-19 dues sponsorships have been received. 4 are for specific people (3 of which need to apply). Letters announcing assistance will go to 44 previous international members.
- Technical Library-only one person has volunteered to house manuals.
- Other projects-Y2K project collaborative with other CE groups in other countries.

CCE Committee (F Painter)
- Conference call with Tom Judd & Bob Morris. Frank has been in contact with ASHE concerning the clinical engineering certification issues. ASHE has been working on implementing a certification process for Facilities Managers that will be sponsored by AHA. Past & incoming ASHE presidents are interested in CE certification, but they have their hands full with the Facilities Managers certification development. ASHE would support encompassing CE certification with the AHA certification, which includes a mandatory renewal process. AHA also sponsors Central Supply, Materials Management, and Safety certification processes. An advantage to AHA sponsorship may be that it is recognizable to hospital administrators. ACCE’s concern about an AHA sponsored certification process is that ACCE retain an influential role in the certification process going forward. ACCE’s goal is to submit a recommendation to AAMI by their November Board meeting to offload the program intact, with a new process in place by January.

ACTION ITEM: Frank will develop proposal for ASHE. Will also run past Bill Betts prior to Mike Miller.

Other Activities

Election Results (F Painter)
- Vote was unanimous with no-write-ins. 61 were received.

ACCE Board of Directors unanimously approved the new slate of Board of Directors.

CONGRATULATIONS Jennifer, Brian, Bryanne, Caroline, Henry, Ted, Vince, and Gary!!

ACCE Update (F Painter)
- An ACEW was held in Hartford, CT following the annual AAMI meeting. Several international attendees remarked that they found the presented topics to be more advanced than what they find in their countries. Expect to receive $500 for this workshop.
- Committed to two more ACEWs in 1999: Moscow in September and Cape Town in November.
- Planning an ACEW in March 2000 in Dominican Republic.

World Congress (F Painter)
- ACCE is committed to a 2-day presentation on equipment specification & acquisition immediately preceding the World Congress.
- Looking for a temporary volunteer to serve as webmaster.

HealthTech 2000 (B Wang)
ACCE will chair the clinical Engineering track in Dallas at HealthTech 2000.
Advanced Health Technology Management Workshop
Cape Town, South Africa

Health technology management leaders from twenty Sub-Saharan African countries participated in an Advanced Health Technology Management Workshop in Cape Town, South Africa November 8-12, 1999. Eight ACCE members were among the faculty presenting to some 65 attendees. Tom Judd (ACEW coordinator), Jim Wear, Frank Painter, Bob Morris, Binseng Wang, and Joe Dyro from the USA were joined by fellow ACCE members Andrei Issakov (Geneva, Switzerland) and Enrico Nunziata (Mozambique).

The Regional WHO Director has determined that Health Technology Policy in the Africa Region should address technology management, human resource development, research and communication, and access to information. The goal of the Workshop was to build strength and capacity for health technology management in the Africa Region. The prime objectives were to (1) raise awareness of HTM for health decision-makers at policy level in the Region; (2) provide latest information and widen awareness of fundamental and advanced concepts and methods of HTM; and (3) share positive HTM experiences with decision-makers from other countries in the Region. The Workshop addressed planning, funding and management of healthcare technology and the required infrastructure to achieve optimal outcomes.

The Workshop was organized by ACCE, World Health Organization (WHO), African Federation for Technology in Healthcare (AFTH), Department of Health of South Africa, and the South African Medical Research Council (SAMRC) in association with the International Federation for Medical and Biological Engineering (IFMBE) and the International Federation of Hospital Engineering (IFHE). The event was co-sponsored by the Association for Appropriate Technologies (FAKT), European Union (EU), Finnish International Development Agency (FINNIDA), German Technical Cooperation Agency (GTZ) and the Oregon Health Sciences University (OHSU).

Welcoming and opening remarks were made by Peter Heimann (SAMRC), Director of WHO Collaborating Centre for Essential Technologies in Health and Secretary-General of AFTH; Andrei Issakov (WHO); Robert Morris, Past President ACCE; Mladen Poluta, Director of Healthcare Technology Management Programme, University of Cape Town and Chairman, IFMBE Working Group on Developing Countries; Nonkonzo Molai, Director of Health Technology Policy, on behalf of A. Ntsaluba, Director-General of the Department of Health of the Republic of South Africa; Nico Walters (MRC) on behalf of M.W. Makgoba, MRC President; and Bernard Shapiro, IFHE Secretary-General. See photo.

In his opening remarks the Director-General of the Department of Health of South Africa highlighted the following points:

- Level of health service delivery has not improved much in spite of considerable investment in importing new technologies and operational expense of supporting these technologies. For example, the lack of equipment maintenance and repair is a major stumbling block in the effective provision of care and is related to poor planning and acquisition/procurement.
- The most important intervention is ensuring a stable supply of competent technology managers. Desire the Workshop to assist decision-makers and planners to deal with complex issues of planning, life cycle, transfer, management and utilization of health technology, so that organized plans for education, training and placement of HTM professionals can be developed.
- This workshop is intended to impart skills to the HTM community to take actions to ensure and enhance the safety of health technologies and facilities.
- HTM is one of the major cost drivers in our healthcare system within the area of resource mobilization. The broad...
framework for comprehensive HT policies has been created. Top priority is the creation of a HT system composed of acquisition, management, planning and assessment as subsystems.

- The major short-term strategic action is conduct of a Comprehensive National HT Audit. A second action is to take the Essential Health Technology Package (EHTP) software for field-testing. The two will be merged to determine the level of intervention required from government.

The following are highlights from the Executive Summary of the Workshop. A full text of the Summary can be obtained by contacting ACEW Africa coordinator Tom Judd, Tom.Judd@kp.org.

**Technology Trends and Impacts**

Health outcomes and a country’s economic system are linked. Health data is needed to understand and improve health system performance. Evidence supports the positive impact of HTM on health system performance. Technology trends impact future delivery systems for devices, supplies, medical procedures, and sites of appropriate care.

**National Health Technology Management Policy and Communication Plan**

Major changes in technology sophistication and complexity are expected in the next decade. Management capacity will determine a country’s ability to absorb technology. HT policy is indispensable and implementation documents have been drafted, covering both process and content to assist countries with development and ongoing monitoring of national HT policy. Managerial competencies are required for the effective use of technology healthcare planning for district health management in Africa.

Action learning is the best method for training technology managers with incremental changes expected over time. Leadership needs an effective district-level information system to do management by fact.

**Y2K Issues**

The magnitude and source of problems were identified. Strategies to ensure operation were discussed.

**Macro Technology Assessment and Strategic Planning**

Evaluation of safety, efficacy, and cost-effectiveness of new procedures and equipment is appropriate in developing countries and ensures “evidence-based” decision making. It creates a bridge between science and decision making and is the only real contribution toward ensuring sustainability. Objectives: (1) When should new technologies be adopted and older ones replaced? (2) Which clinical services should be offered to address the needs of the patient population? (3) What changes need to be introduced to the existing clinical services?

**Micro Technology Assessment**

This includes evaluation of equipment to be purchased for a single hospital; an example was provided of developing a multidisciplinary committee for capital equipment assessment, including the evaluation of information available from clinical engineers. The content of technology audits was described using the book *Medical Technology Management* from Yadin David and Thomas Judd, published by Spacelabs, 1993. Examples of techniques for conducting the audits were provided from Senegal, South Africa and Namibia.

**Planning, Selection, and Procurement Strategies**

Key issues discussed included importance of planning, life cycle costs or cost of ownership, pros and cons of the tender process, an evaluation of the need, impact, costs and benefits of new technology, an evaluation of available products on the market, and acquisition of the best product for the needs. Alternatives to acquisition discussed were lease, rental and donation.

**WHO Essential Healthcare Technology Package (EHTP)**

EHTP, a new making tool for effective HTM, links human resources, drugs, and equipment and facilities for diagnostic and therapeutic procedures. Available at no cost from WHO, it is adaptable and appropriate for developing countries, focuses on interventions and addresses all the necessary requirements, allows for various scenarios, and can be used to determine the criticality of equipment in the provision of care.

**Healthcare Equipment Donations**

Donation guidelines proposed by FAKT, ACCE and others have been combined into draft WHO guidelines, which
can be adapted to each country (or organization’s) circumstances. The WHO guidelines formalized the communication link between donors and recipients. Forms requiring essential information in this communication link are provided. Donations play an important part in providing needed services, including in some countries, up to 80% of equipment. Donations must be managed for appropriateness and effectiveness.

**Healthcare Provider – Vendor relationships and Partnerships**

Identify vendors that have your interests in mind and partner with them. Everything is negotiable. Clear communications, documenting expectations, and supporting good vendors improves the quality of the service.

**Maintenance and Service Management**

A comprehensive inventory is the foundation of a good management program. Gathering financial data along with service activity permits evaluation of actual service costs. Data is needed for effective service management, followed by the ability to act on the data. Resources in an environment of fixed resources can be created through a demonstration of cost savings.

**Budgeting and Financial Reporting**

Budgeting for an in-house clinical engineering department, cost recovering methods, and financial planning for a for-profit service company were presented.

**Human Resources Development**

Key issues discussed were roles and responsibilities of biomedical equipment technicians and clinical engineers, what managers can do to improve the clinical engineering program, the productivity of maintenance personnel and how it can be improved, and how to determine the personnel requirements of a health care technical service (HCTS).

Professional development of clinical engineering personnel through education and professional organizations was discussed. Appropriate user training can enhance health outcomes.

**Health Care Technical Services (HCTS)**

HCTS provide a structure for a decentralized, countrywide provision of HTM services. Case studies of various models were presented from Kenya, Malawi, Cameroon, Senegal, Nepal, Mozambique, and Tanzania. Key contributors to development of these models in the Region include GTZ, FAKT, EU and FINNADA. Decentralization necessitated a rethinking of older models and allowed greater opportunities for public/private mix of service provision.

**Piet Human presenting Yenza, a blueprint for management transformation.**

**Safety, Risk Management and Infection Control**

Key issues presented were infection control and maintenance of medical equipment with protection of the staff, the identification of risks and hazards by incident review, risk reduction and sharing, use of a systems approach, an increase in training related to user errors, and a review of safety standards and regulations.

**Quality Assurance and Improvement**

Medical equipment quality assurance and improvement concepts such as user and service training, regulatory compliance and patient incident investigations were presented. Quality of care is improved through development of appropriate quality improvement infrastructure, use of evidence-based medicine to drive care, the provision of data feedback to practitioners on the effectiveness of their care versus peers, and the creative use of the EHTTP to drive prioritization of quality improvement initiatives.

**Computerized Management Systems**

A computerized equipment management system is essential to manage a large inventory. The principles and philosophy of design and basic elements of a countrywide system for developing countries was described. Service costs, productivity, and quality improvement initiatives require a computerized data analysis system. Purchase price of hardware and software is only a small portion of the commitment for use of this system.

**Utility Systems**

Utility systems requirements should be included in HTM procedures. Clinical engineering should be involved in the design of facilities and their utility systems. Infection control is important with regard to all utilities, and particularly HVAC and water.

**Enrico Nurzi (aka) presents his work in Mozambique**

**Senti Thobejane makes closing remarks**

**Professional Registration and Certification**

Certification is the only professional standard available to measure practicing clinical engineers and biomedical equipment technicians. Certification is a voluntary, peer review process, not a mandatory
countrywide registration. Certification has been used by developing countries to increase recognition of clinical engineers, and measurably raise the level of health care provided."

"Medical Equipment Troubleshooting

A centralized approach was presented, with readily understood and practical techniques. A troubleshooting text guide was provided.

After the formal presentations, participants met to formulate recommendations for future workshops and means to implement the material presented at the present workshop. Evaluation forms were completed. On the final day, Tom Judd, Peter Heimann and Andrei Issakov summarized the Workshop goals, objectives, and conclusions. Certificates were presented to attendees. Senti Thobjane, Superintendent General for the Northern Province, Department of Health & Welfare, South Africa gave the official closing remarks.

Peter Heimann and Mladen Poluta handled all local arrangements and ensured that Workshop participants and faculty were warmly received and properly entertained.

"Outsourcing of Service Management

Elements of success for outsourcing include thorough knowledge and information, good initial data, and continuous monitoring of the relationship."

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ACCE News

The Annual Conference and Exposition for the Selection, Integration, Management and Support of Healthcare Technology

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Michigan Conference 2000

The Michigan Society for Clinical Engineering in collaboration with ACCE will convene a Conference held every five years in South Eastern Michigan in October 2000. The Conference provides opportunity, exposure and a forum for those who are not funded to attend a medical device related annual meeting such as HealthTech, RSNA, ACCE, ASHE, AHA, or AAMI. This will be the first time ACCE has co-sponsored this Conference. AAMI and MSCE have presented three such Conferences since 1983. We hope to provide some teleconferencing opportunities for those of you who are interested in distance learning. For further information: Bryanne Patail, bpatail@beaumont.edu or 248-551-0552.
Calendar of Events

- EMBEC '99, Nov. 4-7, 1999, Vienna. +43 1 588 04-0, +43 1 586 91 85 fax.
- 19th Annual Northeastern Biomedical Symposium, Nov. 8-10, 1999 Manchester, NH. Info: www.nncb.org
- AIMBE 9th Annual Event, March 3-4, 2000, Washington, DC.
- AAMI 2000 Conference & Expo, June 3-7, San Jose, CA. 800-332-2264, ext. 233; education@aami.org
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