ACCE News

Vol. 10, No.1– January 2000

American College of Clinical Engineering

Join Us at the Third ACCE Symposium

ACCE NEWS FEATURES

Y2K Retrospective ☞

ACCE members relate their Y2K experiences. Read what Tom Bauld, Ted Cohen and Frank Painter have to say. ***Turn to page 13!***

Third ACCE Symposium ☞

Experts from government, industry and the hospital community come to grips with medical telemetry. How will frequency allocation affect you? What about interference? ***See back cover!***

ISO 9000, HCFA & You ☞

Should your hospital be ISO 9000 certified? Will ISO 9000 supercede JCAHO? What does HCFA have to say? ***See Meetings on page 5!***

INSIDE THIS ISSUE

ACCE News
21 Bob's Lane Setauket, NY 11733

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.

ACCE on the Web

http:// accenet.org

President's Message

Jennifer C. Ott, MSBME, jennifer.ott@tenetstl.com

Well, I for one am glad the y2k hoopla is over. It was an uneventful night in St. Louis. We had the staff in place in case of a disaster, but thankfully it ended up to be a nice company get together. All in all the preparation was worth it, we improved our inventory, remediated and replaced items that were well overdue. Plus our relationship with our Information Systems department improved, a relationship that is soon to grow with our implementation of Electronic Charting, PACS, and the installation of other clinical systems on the hospital network infrastructure.

The best part of December 31 and January 1 was watching the international coverage on how the different cultures celebrated the rollover to the new millennium. This brings me to my first topic: Advanced Clinical Engineering Workshops. I discussed this in my last letter but the response has not been as I had hoped. I feel there is a perception that ACCE incurs a great cost to develop these workshops and the same group of members always organizes and decides who can participate. First, the workshops are sponsored by international organizations which means expenses are covered for faculty. Second, while there have been a core group involved in getting the program where it is today, fresh blood is always needed. This is a great opportunity to see parts of the world you may never even dream of visiting, share your knowledge on clinical engineering while feeding curious international minds, and incur minimal expense! Most of the topics are already developed and would only require your experiences to bring them to life. As our dynamics change so does the international segment; thus, new topics are always encouraged. Please contact Bob Morris [morris@ohsu.edu] to express your interest.

My second topic is an update on the website. We have had some technical and professional glitches during the past few months. The technical glitches were due to the Server Company having problems, which have since been corrected. I am happy to report Bruce Morgan is temporarily back on-line at least until March. A big thank-you goes to David Denham who has agreed to provide some assistance. They will be heavy at work updating the site and creating a member-only section. If you have any items please contact Bruce Morgan at jmorgan@ibm.net.

Jennifer Ott

The third topic is one of organizational assistance. I reported in my last letter that we were looking to have assistance with general bookkeeping, membership tracking, communication, and other general activities that would benefit from a single source point of contact. We originally pursued ECRI with a proposal but have thought that a member or a member's family member would provide a better benefit in helping this succeed. If any of you are interested or have a family member that is interested I would be happy to review the proposal with you. [jennifer.ott@tenetstl.com]

The Year 2000 teleconference series is in the planning stages. If you have any topics that you feel would benefit from a lunch and learn session please send them along with a suggested speaker to Jim Wear at wearjam@lrn.va.gov. This is such an excellent source of education for our members and the staff at their organizations. Do not miss out on this opportunity, however, it is a greater benefit when we can deliver the topics that are of interest!

The telemetry issue is coming to the forefront so what better topic for our 3rd ACCE Clinical Engineering Symposium to be held during the beginning of AAMI. Mark your calendars and plan to arrive early so you can witness the group Brian Porras has put together. It will prove to be a most interesting discussion!

Frank Painter has been hard at work sifting through the CCE issue. Progress is being made but not at a pace we originally had hoped. There have been severe limitations because of the involvement of AAMI. There are some other contacts in the works and we will keep the membership informed as things progress.

Another important issue that has come to light is the recent discussions involving Medical Error. I am working on putting together a group to draft an ACCE response. I am sure visions of Ralph Nader are going through everyone's head and it is important that ACCE provides the necessary expertise to sift through the issues. I will keep you posted on the progress.

If all of you are in the same boat as me it is wonderful that y2k is over because we can now get back to our real jobs. There are two ways to consider the newly available time: 1) Realize you are now at least a year behind on your job! or 2) Get more involved with ACCE issues and put that previous y2k time to good use! As I am combining the two realizations, so I had better sign-off. Welcome to the new millennium, may the next 100 years prove as exciting as the past!

ACCE News

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Letters

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ACCE Board Hears Bell

Editor--The Board wishes to acknowledge and respond to David Bell's comments in the last issue of the *ACCE News*. Evidence of clinical engineering's struggle with identity abounds. Witness the progressing merger of clinical engineering with information systems technology or with asset management. Witness as well the CE Board of Examiner's discussion of acceptance criteria for certification examination triggered by AAMI's decision not to accept new candidates because of, among other reasons, an unacceptably low quantity of applicants. In its development, ACCE has also debated the identity issue. Before the current Board responds to Dave, perhaps the readers will find a historical perspective of the membership issues he raises helpful.

Historical Perspective

The founding Board recognized that there were organizations in existence, such as AAMI and ASHE, whose mission embraced the collective needs of broad groups of healthcare technology professionals. Within those organizations, clinical engineers lacked a vehicle to independently organize or present a unified voice representing the unique interests of clinical engineers. ACCE was formed to be that vehicle just as SBET was a vehicle for biomedical equipment technicians. Yet the founding Board also recognized the benefit of networking with other healthcare technology professionals and valued their contributions to ACCE activities, including participation in committees and development of programs. At the inception of ACCE, the Board of Directors identified four classifications of membership, identified in the Bylaws, which support the inclusion of non-clinical engineers:

- Individual: A person demonstrating evidence of professional practice of engineering in a clinical environment for at least three years, and meeting one or more of the following three conditions: Possession of a Baccalaureate degree in an Engineering discipline or Engineering Technology from an accredited College or University (or Foreign equivalent); or Certification as a Clinical Engineer, by the International Certification Commission for Clinical Engineering and Biomedical Technology; or By recommendation of the Membership Committee in recognition of exceptional contributions, consistent with criteria established by the Board, to the profession of Clinical Engineering.
- Fellow: An individual member that has advanced to Fellow status in recognition of distinguished service to the profession or achievement in the field of Clinical Engineering.
- Associate: An individual committed to the mission of this organization, who has demonstrated a contribution to the advancement of the clinical engineering profession, and meets other requirements established by the Board, but does not meet the other conditions required for Individual membership.
- Candidate: An individual interested in the purpose of this organization and meeting one of the following two conditions: current enrollment at least half-time in an accredited baccalaureate or graduate program in engineering, engineering technology, or related course of study, or completing the three-year clinical experience requirement for Individual membership after receiving a baccalaureate of graduate engineering degree.

The Board adopted these classifications believing they would encourage participation and networking of clinical engineers and their colleagues while remaining focused on ACCE's stated mission, also contained in the Bylaws:

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

Following much discussion and debate, ACCE adopted the following definition of a clinical engineer which emphasizes a platform of engineering science yet attempts to leave room to fit the evolving role of the clinical engineer in healthcare:

> *A clinical engineer is a professional who supports and enhances patient care by applying engineering and managerial skills to healthcare technology. Clinical engineers manage personnel, finances, instrumentation and projects to promote the safe and cost effective application of technology.*

Response to Dave

The Board is the servant of the membership and so the Board welcomes your challenge to review the various membership statuses and invites the ACCE membership to participate in this discussion. Comments published in the *ACCE News* are welcome. Additionally, the Executive Board members can be contacted with comments as follows:

Name	Position	Phone Number	E-Mail Address
Jennifer Ott	President	(314)577-8018	jennifer.ott@tenetstl.com
Bryanne Patail	1st Vice President	(248)551-0550	bpatail@beaumont.edu
Brian Porras	2nd Vice President	(704)733-5056	brian_porras@premierinc.com
Caroline Campbell	Secretary	(202)877-5635	cac1@mhg.edu
Henry Montenegro	Treasurer	(561)881-2725	mhmont@ihswpb.com
Bob Morris	Past President	(503)494-8420	morris@ohsu.edu

Following a full review of the matter, the Board will provide a detailed response to the issues you've raised. Thanks for speaking out!

Jennifer C. Ott, jennifer.ott@tenetstl.com
ACCE President

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

Michigan Quintennial Meeting

Michigan Society for Clinical Engineering, msce@msceonline.com

A Planning Committee is working to present a joint meeting, sponsored by the American College of Clinical Engineering (ACCE), the Michigan Society for Clinical Engineering (MSCE) and AAMI this fall in the Detroit area.

A major focus will be the opportunities for integration and collaboration of clinical engineering and medical information systems departments. Other topics are being considered and are shown on our survey. You can link to the survey at http://msceonline.com. Once there, just click on your state on the map and you will get the survey. It will take only 5-10 minutes to complete.

The Planning Committee for the Michigan Quintennial (repeating every five years) Meeting is requesting your participation in our electronic poll process. The poll is the fundamental needs assessment tool and we need a significant response to make final determinations on topics to present. Your feedback is essential, whether the response is positive or not.

We are asking you to answer for the institution that you represent, so use that perspective as you reply to the individual questions. Answers are not identified, except for the geographic region.

As we consider service schools, we originally planned to do an electronic re-survey later, but now we feel it would be more effective to ask you to suggest specific manufacturers and device models via e-mail to education@msceonline.com. Include your contact information please. In addition, please indicate the number of individuals that you would likely send to the meeting.

If you have any questions, contact us at education@msceonline.com.

Happy New Year and thanks for your help.

IEEE EMC Meeting

Robert J. Berkovits, BerkovitsR@jsc.mil

ACCE member Bob Berkovits recently attended an IEEE EMC meeting in the Baltimore, Maryland. Cdr. Jon Casamento of the Food and Drug Administration spoke for more than an hour about Medical Device Interactions with Anti-Theft and Security Systems. The presentation was interesting and informative despite the difficult-to-read fine details on the set of view graphs. A half-hour of discussion followed the presentation. ACCE member Boris I. Gramatikov, Research Associate at the Johns Hopkins University School of Medicine, also attended the meeting. Bob and Boris discussed plans for future meetings focusing on biomedical engineering topics in the Baltimore area.

ISO 9000 and HCFA

David A. Simmons, dasimmons@prodigy.net

On December 8, 1999, four individuals met with representatives of the Office of Clinical Standards and Quality, Health Care Finance Administration (HCFA) in Baltimore, MD. Representation included a representative of the US Navy Bureau of Medicine and Surgery, the former Inspector General of BuMed, a Vice President of Alamo Learning Systems and myself. The representatives with whom we met had a good working knowledge of ISO 9000. The stated purpose was to determine what consideration, if any, was being given to the application of ISO 9000 into the Medicare "Conditions of Participation." To that end, we submitted three items as part of the Agenda, as follows:

1. Request that this meeting be the first of a series of meetings to establish an ongoing dialog regarding ISO 9000 applications.
2. An invitation to appoint representation to the Standards Committee of the Health Care Division of the American Society for Quality.
3. A proposal to adopt/accept ISO 9000 as an acceptable Health Care Quality Management System alternative to JCAHO/NCQA/ AOA accreditation.

Background Information

- There have been considerable American Society for Quality/Health Care Division (ASQ/HCD) activities over the last four years in response to membership requests for more information regarding ISO 9000 applications in hospitals and other health care provider organizations.
- Increased dissatisfaction with the JCAHO accreditation, as expressed by hospital staff, both clinical and administrative, due to high survey preparation costs, reduced resource availability during survey preparation periods.
- JCAHO accreditation does not reduce clinical errors as documented by the DHHS Inspector General's Report officially released on July 27, 1999 and, more recently, the Institute of Medicine of the National Academy of Sciences released in December 1999.
- On December 7, 1999, President Clinton signed a Directive requiring the DHHS and HCFA provide

recommendations to the White House in sixty days that would move to reduce medical errors in those organizations that ensure Federal workers and/or that provide federal health care insurance coverage.

Current Status

- At least eleven US Health Care Organizations, including six hospitals and a variety of other organizations, including an American Red Cross Regional Office, several Orthopedic Clinics and related health care delivery providers, are now Registered to ISO 9002 or 9001.
- Several other hospitals and related health care providers are in the process of ISO 9000 implementation.
- At least two hospitals have dropped JCAHO accreditation in favor of ISO 9000 registration and continued Medicare reimbursement through the individual state survey process. Many more hospitals are closely watching this trend and are interested in following suite.
- The HCFA Program Safeguard, Statement of Work, Attachment J-1, Paragraph 10.A.3 requires that all HCFA contractors who annually perform work totaling more than $1 million under all Task Orders shall be ISO 9002 compliant. Currently, thirteen organizations, including three Blue Cross/Blue Shield organizations must comply with ISO 9002. *See Footnote.*
- Worldwide Health Care Organizations Registered: over 1,200.
- ASQ/HCD Standards Committee created in 1998 to develop a HC ISO 9000 standard and/or Guideline document. Pursuit as an international standard is being considered.
- The Big Three automobile manufacturers have been strongly pressuring JCAHO to adopt ISO 9000 as a baseline Health Care Quality Management System for over two years. (Note: The big Three currently require all Tier One suppliers to be ISO 9000 compliant and consider Health Care as a contracted and provided Service.)
- The American Red Cross is planning to implement ISO 9000 in FY2000 in a major segment of its operations dealing with its Clinical Laboratories.
- GP-26-A, *A Quality System Model for Health Care: Approved Guideline* was released by NCCLS in October 1999. This document provides a Crosswalk that allows and facilitates the Quality Systems Essentials to be fully implemented by use of the Clauses of ISO 9001.
- Peer Review Organizations (PRO), funded by HCFA, are increasingly interested in ISO 9000 as a method for creating metrics for monitoring Medicare recipient organizations performance and accountability.

Meeting Discussion

Because of the two reports and the Presidential Directive, the HCFA representatives were very receptive and interested in a dialog that could, in part, potentially provide methods, systems and processes that help in medical error reduction. Our focus was in the areas of PROCESS and CONTINUOUS QUALITY IMPROVEMENT.

While HCFA administers the Medicare Reimbursement Program and the "Conditions of Participation" for hospitals, there are many, many other non-hospital providers to consider as well. Eighty percent of the nation's hospitals participate with JCAHO accreditation, which means that they are surveyed every three years. HCFA folks shared with us that there are many non-hospital providers that receive Medicare money that have not been surveyed in over seven years. It became very clear that HCFA has its work cut out for improving Medicare systems.

Our representatives shared experiences and benefits achieved in the US Navy Bureau of medicine and Surgery hospitals and Headquarters, as well discussing the overall approach to ISO 9000 implementation.

Regarding the possibility of integrating ISO 9000 into the "Conditions of Participation," that would require legislative action by the Congress at the request of HCFA. This is a very long, time consuming and labor intensive process. I can support this based on direct personal experiences. HCFA personnel indicated that there are other approaches that are being discussed that could be readily implemented that would be equally effective without the need for legislation. Some of the possibilities include:

- Require that federally funded Peer Review Organizations be ISO 9002 compliant or registered.
- Increased involvement between PROs and Medicare money recipients regarding monitoring and evaluation of HCFA developed metrics for recording and reporting.
- Create a Medicare provider self-reporting form that would provide data and metrics to HCFA and/or the PROs on a scheduled periodic basis.
- Perform random audits of Medicare providers to validate self-reported data, information and metrics. Results of the random audits would result in either continued participation or termination of participation in Medicare.

Summary

HCFA representatives agreed to the follow-on series of meetings to potentially involve other organizations and health care providers that express interest in ISO 9000 applications. They also indicated an interest in participating in the ASQ/HCD Standards Committee activities. These decisions, coupled with their potential actions with the PROs and the self-reporting, random audit approach clearly indicate HCFA's intent to utilize ISO 9000 concepts and methods to improve processes, especially in the areas of management review, preventive and corrective action, auditing, documentation control and reporting.

Footnote

HCFA Program Safeguard, Statement of Work, Attachment J-1, Paragraph 10.A.3
3. ISO 9002 Registration

ISO 9002 is a standard of the International Organization for Standardization (ISO). ISO is a specialized international agency for standardization with national standards bodies in 91 countries. The American National Standards Institute (ANSI) is the member body representing

the United States. The purpose of the ISO is to promote the development of standardization and related world activities to facilitate the international exchange of goods and services, and to develop cooperation in intellectual, scientific, technological, and economic activity. The ISO 9000 series standards are the product of the ISO Technical Committee 176 formed in 1979 to harmonize the international activity in quality management and quality assurance standards.

The American Society for Quality (ASQ) administers the Technical Advisory Group for ANSI that contributes to the ISO 9000 standards. ASQ publishes the standard and is an important source of information about it. A brief explanation of the ISO 9002 standard is available at the web site of the American Society for Quality at http://www.asq.org. ASQ may be telephoned at 1-800-248-1946.

A list of accredited registrars is attached to this Statement of Work as Appendix V. The PSC is encouraged to contact a registrar to obtain an estimate on the registration process and cost. Any registrar will be happy to explain their services and offer a cost estimate. The registrar's level of effort for auditing and registering the PSC operation is estimated according to a standard formula, so costs should not vary greatly from one registrar to another. HCFA believes that ISO 9002 registration should not impose an undue burden on the PSC, especially when the PSC establishes its operation as ISO 9002 compliant from the beginning. An accredited registrar can provide you with an independent assessment of the effort required.

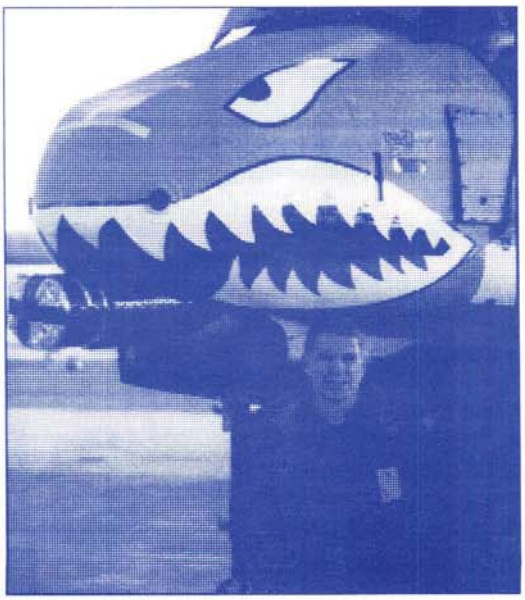
All work performed under this contract shall be ISO 9002 compliant. HCFA requires ISO 9002 registration for PSC who annually perform work totaling more than $1 million under all Task Orders. The PSC shall be ISO 9002 registered within 1 year of being awarded the task that takes them over the $1 million level. HCFA encourages all PSCs, regardless of the amount of work performed under this Statement of Work, to be ISO 9002 registered. Not only will this help build high quality work processes, but it also will prepare them for additional tasks that may exceed the $1 million level and require that their operation be ISO 9002 registered.

On the Move and In the News

Warthogs and Clinical Engineering

In December 1998, ACCE member Robert Berkovits (NARTE certified EMC engineer) a clinical engineering student at Touro College, Long Island, New York, took time off to attend to the CNS (communications navigation system) of the USAF A-10 Warthog aircraft. Some electromagnetic interference incidents occurred between a modified control display unit (CDU) box and an UHF radio. In his investigation he used some of the forensic engineering principles taught by his former professor at Touro, Dr. Joseph Dyro. Dyro introduced the class to Marvin Shepherd's systems approach to categorize device-related failures. The use of the Device, Operator, Patient, Environment, and Facility categorization was changed by substituting source of interference for Device and affected equipment for Patient.

As a result of preliminary investigations and testing of the A-10 at the air base in Tucson Arizona, it was discovered that the CDU had two significant design changes that were not properly tested for EMI, nor was a design analysis for these changes performed. These were the increase of a clock frequency to 27 MHz and an



increased pin out density of a signal /control connector from 79 pins to 100 pins. The ninth harmonic of the clock was at the 243 MHz guard frequency of the UHF radio. The high-density pin-out increased the common mode radiated emission of the CDU and its interface cabling. These emissions from the cables, which were within-line-of-sight of the UHF antenna, caused an audio tone like interference to the radio. The problem was eventually solved after extensive and expensive testing and by use of a newly designed in-line filter.

The two main lessons to be learned from this incident are that (1) design analyses should be performed when a change is made to equipment and (2) the proper test configuration and EMI testing should be performed on the modified equipment. For new equipment with many clock frequencies and higher density interface connectors, common mode radiated emissions

can be a significant threat to EMC if proper design methods are not applied as early in the design process as feasible.

Ridgway Searching for Needles

In full-page ads in several trade magazines recently, ACCE member Malcolm G. Ridgway was recognized by COHR for 25 years of uncovering cost-saving technology solutions for America's health-care providers. Ridgway is Senior Vice President, Product Development and Chief Technology Officer. The ad, featuring a rather flattering photograph of this outstanding clinical engineer, relates some words of wisdom concerning another famous person.

When asked the difference between himself and the average man, Albert Einstein once said that when searching for a needle in a haystack the average man stops when he finds the needle. Einstein would look for all possible needles.

COHR invited readers to stop by www.cohr-inc.com to learn more about Malcolm's latest discovery.

Tobey Clark Keynote Speaker

The 19th Annual Meeting of the Northeastern Biomedical Symposium, hosted by the Northern New England Society for Biomedical Technology, selected as Keynote Speaker, "one of our own 'Old Timers:' --- Tobey Clark."

Mr. Tobey Clark is the Director of Instrumentation and Technical Services at the University of Vermont. The Instrumentation and Model Facility Group designs, develops and fabricates instrumentation for research, with a focus on life science apparatus. The Technical Services Program provides healthcare technology management assistance and direct services to healthcare facilities in Vermont, New Hampshire and New York. His staff of 45 consists of clinical, electrical, and mechanical engineers, BMETs, scientific instrument fabricators, information systems specialists and support staff.

He has a secondary appointment to the faculty of the Computer & Electrical Engineering Department where he teaches courses in biomedical instrumentation and advises biomedical engineering students in senior project studies.

Tobey was co-chair for the 1997 and 1998 AAMI Annual meetings and is currently on the AAMI Board of Directors and on the editorial board for *Biomedical Instrumentation and Technology*. He is a CCE and has earned the Senior designation by ASHE. His education background is a BS in Biomedical Engineering form Boston University and a MSEE from the University of Vermont.

Nunziata from Mozambique to the Big Apple

Enrico Nunziata, ACCE member currently doing his share in rebuilding the healthcare system of Mozambique, took a break from the scorching heat of that sub-Saharan country by visiting New York and Colorado over the New Year's holiday time. Frank Painter gave Enrico, his wife Elia, and daughter Cybeles a tour of New York, which included a visit to the offices of the *ACCE News*.

Enrico, Painter and Dyro were recently together at the Advanced Health Technology Management Workshop in Cape Town, South Africa. The New Year's Day reunion gave them a chance to review the success of the African workshop, plan for a future regular column on international perspectives on clinical engineering, and enjoy fine wines from Long Island.

Betsy and Joe Dyro, Cybeles, Enrico and Elia

ACCE News

THE VIEW FROM THE PENALTY BOX

David Harrington, davesbt@kersur.net

It has often been said that if you want to predict the future you look to the past. Thirty years ago in 1969 there were headlines proclaiming that 10,000 people were electrocuted in hospitals every year. In all the years I have been in this business I have never been able to confirm that any patient ever was electrocuted in a hospital by medical devices. I did read about two cases where some "rocket scientist" plugged electrode wires into an electric cord with resulting deaths but neither of these cases was in a hospital. The headline helped push our profession by selling fear, it brought AAMI an issue that it could hang its hat on and provided ECRI with a pulpit. It also was the catalyst for many companies to market "safety devices" and test equipment.

As we fast-forward to 1999, we again see headlines stating that 48,000 plus people are killed in hospitals every year by medical mistakes. We have a Presidential Commission "looking into" the facts and charged with coming up with guidelines to correct the problem. We have the legal profession begging for information so suits can be filed, as long as they get their 30% plus expenses and a lot of people avoiding medical care out of fear. I seriously doubt that any of us in this profession has not witnessed an "oops" in the hospitals we work at. This is a problem that is real, unlike its predecessor of 30 years ago.

How is the problem going to be fixed? Some people say we have the technology to prevent all the events, I disagree. Technology is only as good as the people using it and too many healthcare professionals cannot properly use technology. Just think of all the "no problem found" service calls that you responded to or the "user errors." There has to be more education in technology for all the healthcare professionals. That education must include what devices can and cannot do.

Maybe hospitals should post a score card in their lobbies about the injuries like many companies do for accidents that the employees have. Should that sign read "20 days since we last killed someone by a stupid mistake?" I don't think signs like that would do much for the images of hospitals. Who is going to be the AAMI and ECRI of this process? Will it be the physicians? Will it be the administrators? Will it be the engineers? Will it be the lawyers? I sure hope not. That leaves the government, *i.e.*, lawyers who are too dumb to practice law and make a living, or some other group. It surely won't be the risk managers who have known about the problem and done their best to cover it up for years. I think it will come down to the insurance companies (ouch) that will be doing the monitoring. It makes sense, as they know what physician did what to whom and what the outcomes were. With all the pressure to cut costs the insurance companies will be cutting poorly performing physicians out of the plans, and possibly hospitals that are not performing. We all know that JCAHO will not take the hard line with physicians and hospitals.

Regardless of who becomes the new "watch dog" of healthcare we will be involved as a profession. The Y2K hysteria showed that the MIS departments in most hospitals could not and did not managed their technology as well as we handled our technology. If there are new devices coming into hospitals we will be the ones that get the calls when they don't work so be prepared.

In closing I urge all to get involved with the committees at your hospitals, organizations or even with the local governments to be sure that they have sound input on what the technology can and cannot do to prevent the "oops"

Send you thoughts on the subject to the ACCE News for all to share.

ACCE News

Workplace Profiles

Biomedical Engineering Department Profile at Washington Hospital Center

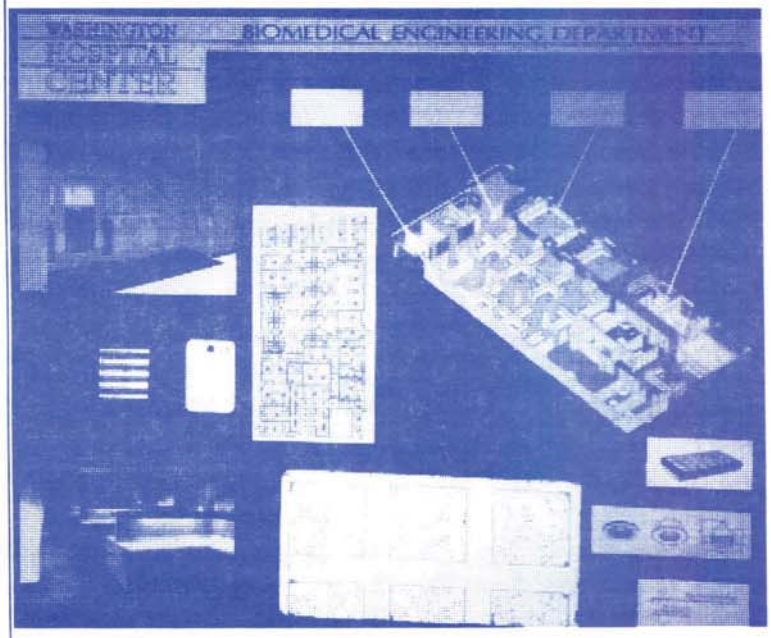
Cheryl Iden, cxi3@mhg.edu and
Caroline Campbell, cac1@mhg.edu

Located in the nation's capital, the Washington Hospital Center's Biomedical Engineering Department offers a variety of services both to our internal and external accounts. As part of MedStar Health Corporation, the 907-bed hospital is one of the leading hospitals in the United States in open-heart surgery and is one of the largest hospitals in the Washington metropolitan region. At the WHC, the Centers of Excellence include many respected specialty areas. Washington Heart performs more than 2,500 open heart procedures per year and performs more heart transplants than any other hospital in the city. The Washington Cancer Institute also surpasses any other hospital in the region for diagnosing and treating cancer cases. Other services provided include the only adult burn center in the metropolitan area, the region's premier shock trauma center (MedSTAR), the Surgical Critical Care Center, Transplant Clinic, thirty-four operating rooms, Imaging Services, Neonatal ICU, and Respiratory Therapy.

The Biomedical Engineering Department is comprised of twenty-two full-time employees and one part-time employee. To provide support and expertise for the variety of imaging and biomedical devices serviced, there are five levels of technical staff including the Biomedical Equipment Assistant, two levels of Biomedical Equipment Technicians, and two levels of Biomedical Equipment Specialists. In addition, there is a supervisor, a manager of imaging services, two levels of clinical engineers, and three administrative assistants.

Following the merger of Medlantic Healthcare Group with Helix Health, the scope of our pre-purchase evaluations, technology assessments, and service contract evaluations has broadened to have a corporate perspective. By collaborating with other hospitals within the corporation, the negotiating leverage for achieving optimal pricing and support terms is significantly strengthened.

At the Washington Hospital Center, there are approximately 12,820 active devices with an inventory valued over $85 million. While much attention is devoted to maintaining our medical device inventory database in Maximo, the Department also repairs, troubleshoots and performs Preventive Maintenance Inspections (PMIs) on biomedical equipment. The Biomedical Engineering Department strives to attain a 90% on-time completion ratio each month for PMIs and this goal is usually met. As a quality assurance measure, at the end of each month, a PMI Summary letter is sent to each department where PMI's were performed to request assistance in providing BME with any devices that need still to be inspected.



On a monthly basis, a quality assurance report is generated to address problematic equipment repairs and recount the number of incident reports. On a quarterly basis another summary of services report is generated which provides more detail about equipment support issues. For departments where the PMI completion ratio is below 90% for four consecutive cycles, action may be recommended and initiated to improve the completion ratio. In addition, pre-purchase evaluations and incident reports seen within the quarter are summarized. In furthering our quality assessment, BME is investigating implementation of ISO 9000 standards.

Biomedical Engineering continues to work on department improvement projects. For example, "Tech Tips" is a resource available on our local BME server for the staff, which provides helpful hints and tips for repairs on medical equipment. In response to a hospital-wide employee satisfaction survey performed by a consulting group, BME has initiated several teams to work on developing and improving areas in our department. For example, one group is responsible for all questions and concerns relating to documentation, while another group is responsible for improving communication. In an effort to decrease operating costs, we are in the process of converting much of our service documentation into electronic format. In addition, time is spent educating technicians on how to enter their own work orders directly into the database.

As hospital department budgets are decreasing, it is important for the Biomedical Engineering Department to scrutinize all opportunities to save money. Performing preventive maintenance inspection presents such an opportunity. One of the evaluated aspects of the preventive maintenance inspection program is to assess the level of inspection needed for microprocessor controlled devices. These devices typically perform a power on self-test that examines many of the functions that one might perform manually. In the interest of labor savings, any potential duplication between the self-test and the manual procedures can be eliminated. BME is involved in assessing data collected over the last decade and quantifying labor savings. Look for this presentation at AAMI 2000.

The Biomedical Engineering Department is involved in many interesting projects. One of the recent initiatives of the Department is to implement proactive management of the electromagnetic environment. Under the auspices of the Safety Committee, the Biomedical Engineering Department Director leads the Wireless Communications Advisory Group which assesses the impact of all proposed wireless communications devices for compatibility in the hospital environment.

The unanimous favorite project involving the Biomedical Engineering Department has been working with the Center's Project Management Team and an architectural firm on design of a new lab. The goal of the project was to design a workspace that would facilitate effective and efficient workflow, contain enough space for consolidation of the entire staff in one area, support growth in off-campus support responsibilities, and reflect the pride of the staff and the institution in the Biomedical Engineering Department. The planning effort was spearheaded by a departmental focus group representing all levels of the staff within the department. Although the funding approval process was lengthy and the designation of space difficult, the end result of these efforts is a beautiful new department which meets the stated goals.

The pictures shown above illustrate the wonderful results of the task. In over 10,000 square feet, there is a clear distinction in access and workflow between the office/administrative area and the technical lab area. An intercom system will facilitate communication between staff in these two areas. Between these two areas are rooms of common interest, *e.g.* conference room, locker rooms, and break room.

The office area was designed with both aesthetics and work efficiency in mind. A classy entrance from a main hospital hallway provides good visibility for the department. The reception area includes a comfortable waiting area with access to a phone. Space layout of the work area was focused on avoidance of cluttering. Filing and workspace are strategically placed out of sight yet close at hand to the reception area.

The technical lab area was designed with two entrances, one for customer access and one for staff access. In the lab area, offices of the Supervisor, Clinical Engineer, and Sr. Clinical Engineer are located close to the customer entrance. The staff entrance includes a workroom where equipment can be cleaned with a central exhaust hood prior to entry into the main lab. Other mess-generating equipment such as the grinder and drill press is housed in this room. The lab area is also very close to an external building exit.

In the lab area are separate specialty rooms for support of dialysis, anesthesia/respiratory equipment, and radiology/laser equipment. Each of these rooms is designed with particular needs in mind. The radiology/laser room contains lead-lined walls, a hoist, and lighting controlled with a dimmer switch. The dialysis room contains a sealed membrane floor with drain and plenty of water spigots and drains at appropriate heights. The anesthesia/respiratory room contains strategically placed sinks and gas outlets. Other specialty areas in the lab include a library for housing of manuals and forms, a parts storage room, and an equipment staging area for storage of equipment awaiting installation or repair.

In the lab area there are enough benches to accommodate the existing staff and an external vendor and there are additional benches to accommodate future growth. Each bench contains a data drop, telephone, task lighting, vacuum outlets, and plenty of power outlets. Ample file and drawer space is included at each bench with the top drawer sized to accommodate a toolbox. Three computer workstations are strategically placed to allow for access to the database and to allow for storage of office supplies and equipment, *e.g.* hole punches and staplers.

At the Washington Hospital Center, the Biomedical Engineering Department takes pride in ensuring a safe and effective patient care environment. This new state of the art laboratory will significantly enhance our ability to achieve that goal.

For further information please contact either Cheryl Iden, Clinical Engineer, or Caroline Campbell, Director, Biomedical Engineering Department at Washington Hospital Center, 110 Irving Street, RM 5A-90, Washington, DC 20010.

INTERNATIONAL COMMITTEE NEWS

Sam Miller, samiller@localnet.com

Lending Library

The ACCE is now establishing a "lending library" of technical information intended to assist ACCE members who are helping with international projects involving donated medical equipment. Technical service and operating manuals for older equipment are particularly needed. Please dust off your libraries in your institutions to see if you have any such manuals for equipment no longer in service, and let Al Jakniunas (our librarian at AJakniunas@huhosp.org) know if you would be willing to let them be borrowed, or if you could contribute them to the library. All contributions will be acknowledged with thanks in this newsletter. The holdings of the library will be posted on the ACCE website and requests for borrowing specific documents or manuals should be addressed to Al Jakniunas.

International Membership Dues Sponsorship Program

The committee is very pleased to announce that a program is now underway to sponsor dues for individual clinical engineers (CE) from countries that are not on an economic par with the U.S. We have received enough contributions from ACCE members at the annual meeting to sponsor at least 15 such individuals. As the first step in this program, letters from the committee were sent to the 44 former members from these countries that have dropped their membership over the past seven years. The letters explained the program, in the hopes that they would return the application form to have their dues sponsored. They were asked in return to participate in ACCE activities, by, for example, contributing articles for the newsletter or promoting memberships in their country.

To date we have received three applications for year 2000 membership. All were very well written and accepted. The applicants were Lúcio Brito (Brazil), Diogenes Hernandez (Dominican Republic), and Arben Hoxha (Albania).

We have not yet established a match between these applicants and individual sponsors (contributors); so if you if you contributed to the program and would like to be matched with one of the above, let me know.

In addition, four other international candidates were named by US members as people that they would like to sponsor, one of whom was a member and therefore does not need to actually apply for membership. The other three will have to apply for membership and be accepted by the membership committee before their dues sponsorship is official. They will be named in a later *ACCE News*.

This program is open to any CE in any country where the $50 US annual dues fee is cost prohibitive. Those CE's who are not yet ACCE members may apply, but the membership committee must first approve them for ACCE membership. Those interested should write for information and application forms to:

Chairman, International Committee, American College of Clinical Engineering, 5200 Butler Pike, Plymouth Meeting, PA 19462-1298, USA or e-mail to ICchair@accenet.org.

Applications for sponsorship for the next round of sponsorships must be received by May 15, 2000, and awards will be made at the annual meeting in June. The International Committee reviews applications and awards made on the basis of technical excellence of the information in the application and on the significance of the ACCE activities participation offered.

U.S. ACCE members can participate in this program by making contributions to the fund at any time or by contributing as part of membership renewals. Contributions payable to **ACCE Treasurer** are tax deductible as part of "professional dues." Any member contributing the full $50 dues can name a particular individual to be the recipient of an award as long as that individual meets with ACCE membership committee approval. Those contributing the full $50 dues without naming a particular individual will be matched with a successful applicant in the hopes of establishing a personal "professional colleague" relationship via correspondence over the course of the year. E-mail questions about this program to ICchair@accenet.org.

Other News

A new project of the committee for the coming year will be to identify ways that the ACCE can communicate and collaborate with similar CE organizations around the world. For more information about this project or to have your name added to the committee as an advisor, contact me at ICchair@accenet.org.

Travel Grant Opportunity

IREX Short-Term Travel Grants for 2000 announced deadlines of February 1, 2000 and June 1, 2000. The International Research & Exchanges Board (IREX) offers travel grants for brief visits to the countries of Central/Eastern Europe, the Newly Independent States of Eurasia, Mongolia, Turkey, and Iran for projects in the humanities and social sciences. These grants are for projects, which do not require any administrative assistance or logistical support (such as placement or access to archives, housing, visas, travel, etc.) Per diem support is for 14 days only, not to exceed $100/day. Grantees' travel may last up to 60 days total, with any additional per diem expenses beyond 14 days paid for by the grantee.

Applicants must have a Ph.D. or equivalent professional/terminal degree in the project discipline at the time of application, and must be a United States citizen or permanent legal resident of the United States. This program funds visiting archives, libraries, and museums for individual scholarly research or conducting research interviews; presentations at scholarly conferences focused on and located in eligible countries; and collaborative projects such as joint publications and comparative surveys. The above program information is abbreviated. Please see the IREX web site below for full guidelines or for more information contact: International Research & Exchanges Board (IREX), 1616 H Street, NW, Washington, DC 20006, telephone: (202) 628-8188, fax: (202) 628-8189, e-mail irex@irex.org, and Web: http://www.irex.org. Ask for Courtenay Dunn, Program Officer, or Jessica Bagdonis, Program Associate.

CE E-Mail Group in Spain

There is a new e-mail group for clinical engineering in Spain. This e-mail list is for the exchange of information about clinical engineering and biomedical equipment repairs (in Spanish: "electromedicina"). The service is free. To access this group send e-mail to majordomo@valme.sas.cica.es and in the body of the letter, type subscribe electromedicina. The e-mail for all list group is electromedicina@valme.sas.cica.es submitted by Carlos Barba at mane@hcu-lblesa.es.

Ukrainian CE Awarded Grant to Visit Thomas Jefferson

Ihor Stupnytskyy, Ph.D., a clinical engineer from Lviv, Ukraine has been awarded an IREX grant to visit and study under Ira Tackel in Philadelphia. He will spend four months learning about CE operations here in the U.S. with the aim of establishing a training center in Lviv for CE's and hospital equipment managers. His visit starts in late February, and he can be contacted via Ira.

Y2K Retrospective

Three ACCE members relate their Y2K experiences in the following collection of articles. Thomas J. Bauld, Ph.D., Manager Premier Inc., Clinical Technology Services Division was Y2K Project: Biomedical Equipment Coordinator for Mercy Health Services. Ted Cohen is Director of the Clinical Engineering Department at UC Davis Medical Center. Frank R. Painter is President of Technology Management Solutions.

Y2K Reflections

Thomas J. Bauld,
tom_bauld@premierinc.com

It's over and done and nothing much happened. The result was due to two main effects. So much software and hardware items were remediated or upgraded and those items that weren't had little or no impact on operations. However, there were enough minor software disruptions in the system I worked for to make us feel very pleased that we had done the remediations. For the biomedical equipment, it was pretty much a non-event with the expected date display problems that were cured by resetting the date.

On the bright side, there are, however, many activities that will have long term benefit in the clinical engineering realm. Equipment inventory cleanup occurred and that is always a benefit. There was upgrade and standardization of software revision levels. In many institutions, clinical engineering staff developed improved relationships with their customer and potential customer departments. Revision level data has been collected for equipment and that may be important for future support. Generally, the universal 5-step process was implemented across all industries and that was good. Staff had the benefit of participating in major project planning activities, which was a new experience for some. Finally, there was considerable overtime which for some was paid, for some, unpaid.

Motivations for the Y2K projects included many factors. Fear of litigation seemed to have been the biggest factor. Decision-makers wanted to ensure they were not found lacking in due diligence. Additional responsibility and notoriety or fame for some individuals was involved. The amount of material written, posted on the web, and distributed through meetings and conferences was immense. The US Postal Service enjoyed a bonanza as thousands of compliance letters, often registered with return receipt requested, were sent back and forth. Thankfully, we had the Internet to minimize the information acquisition. Greed had its role as some companies saw the opportunity to capitalize on capital equipment sales or major software upgrades. The press had much to keep them busy and occasionally they got it right. Consultants saw the opportunity to conduct huge, complex, and expensive projects. Many clinical engineers and BMETs saw lots of additional work with little likely patient benefit. In some ways, the process was analogous to the electrical safety and cell phones scares. And who could forget the attorneys who saw the opportunity for large and dramatic lawsuits. Too bad about the outcome and their failure to gain the expected trillions of dollars.

With some exceptions, there was little real criticism of the effort within our professional ranks. The majority of us went along with the projections that major disruptions might occur. Again, there was the fear of seeming to be incompetent and not recognizing the threat to patients. We had the "embedded chips" hoax. Often, poorly documented examples of medical device "failures" were communicated worldwide, which stirred up unnecessary fears.

Perhaps if we acknowledge some of the excesses that we experienced, we can avoid similar issues in the future. Y2K User Testing to determine device compliance was over utilized. Users found some minor differences as their results differed from the manufacturers, but were they worth all that work? The Federal Government's role was late and lacked leadership that could have minimized much of the work and expense. The FDA could have requested legislation to compel more effective industry cooperation earlier. Manufacturers often didn't provide sufficient information about the real symptoms of non-compliance to allow analysis of whether to upgrade or simply tolerate the problem. Toleration was good. Reports from the US Senate Committee were always out of date and didn't reflect what many of us in the trenches knew about the readiness of hospitals. The liability protection legislation was also late. There was much too little sharing of data and results among users fostered either by the need to protect "proprietary" (marketable?) information or by the fear of litigation. The huge duplication of effort across the country and around the world resulted in a major waste of resources.

On the positive side, we can and should celebrate the benefits of the Y2K activity. This was the most inter-disciplinary effort for our healthcare system. Many Medical Information Systems and Biomedical Departments were in closer communication than ever before and worked very effectively together. Departments such as Telecommunications, Networks, Communications and Facilities were all part of the team and performed excellent work. Operating and support departments gained a greater appreciation of the value and contribution of the Legal and Risk Management staffs.

An area with a long positive future impact was the Contingency Planning / Disaster Planning activities. They are now extremely well refined and well known and will more than meet JCAHO requirements. For many institutions, their Y2K Drills served as one of the two annual Disaster Drills for JCAHO. It certainly helped to raise awareness and identify some current (no pun intended) deficiencies, especially in poorly maintained battery backup systems.

There now exists in healthcare institutions, a comprehensive inventory of software applications that never existed before. It provides a complete understanding of the resources available to the institutions and coordinated planning for the purchase and implementation of upgrades and replacement applications in the future.

We upgraded major portions of the hardware technology and software code to current, high quality, and integrated applications. Technical support costs for software applications should be reduced in the future. There are fewer applications and they employ new and standard technology. Training costs for new employees should be substantially lower due to fewer one-of-a-kind applications and more integrated applications with common user interfaces. Code was cleaned up and old programs were

re-written and/or retired.

In conclusion, it was a unique, worldwide, huge, very expensive, somewhat wasteful, challenging, irritating, and in some respects, overdone project. We came out of it with a much cleaner and more manageable set of software. In some other countries, the industries, utility providers, and healthcare institutions that did relatively little to prepare for Y2K appear to have achieved the best cost / benefit ratios. They spent next to nothing and they experienced little or no failures. Either that or they are unwilling to share those problems that occurred. I guess we may never really know.

Anyway, it was hard work and I'm sure glad it's over.

Y2K: Lessons Learned

Ted Cohen, ted.cohen@ucdmc.ucdavis.edu

1. Software is more difficult to manage then hardware.
2. We all should have included and used a software version field in our Computerized Maintenance Management System.
3. Most medical device manufacturers CAN be trusted MOST of the time but NOT all of the time.
4. Microsoft CANNOT be trusted most of the time.
5. If you spent more than 5% of your annual capital equipment budget on Y2K, hopefully you needed to make those same equipment replacements for non-Y2K-related reasons.
6. Y2K consultants got rich, but most have now been laid off.
7. Whoever designed the leap year calculations made life more complicated than it should be.
8. Who says clinical engineers cannot talk "on-camera" to the media!
9. To test or not to test: the Clinical Engineering community can rarely come to agreement on any substantial issue.
10. Testing solved more problems than it caused, but it did cause some problems.
11. Perception is important. Reality is important. At any given time, either one may be more important than the other.
12. The internet worked great as a communication medium for compliance assessment and problem information up to and including late breaking news on December 31, 1999 and January 1, 2000.
13. Thank You to the Australian and New Zealand clinical engineering community for giving all of us in Europe and the U.S. Y2K "early warning" information.
14. New Years Eve was much easier for those of us in the Western U.S. than elsewhere.
15. Take a break next New Years Eve when the pressure is off.
16. Finally, Y2K in the medical device world was a non-event due to all the preliminary hard work that we all put into the planning, assessment, testing, upgrades etc.

We deserve a BIG pat on the back and we look forward to other administrative and technical challenges in the future.

Mission: A Success

Frank R. Painter, frpainter@earthlink.net

I was pretty much ready to finish up the Y2K activity as the end of the year neared. I knew the research and remediation efforts were on target, but I had had enough. The upgrades and equipment replacements were done on time and it was just a matter of being there and waiting for the surprises. It was very gratifying to have Y2K be a total "non-event", both in the hospitals I managed and in the USA in general.

The part I wasn't ready for was the criticism of a select few media types, lawyers, and other naysayers who called the effort a boondoggle or a hoax. I subscribed to a Y2K list server that just bristled with this sort of "I told you so" drivel.

An evaluation of the situation and listening to some of the musings of others yielded some interesting observations. The peripheral benefits beyond Y2K being a non-event were:

The DISASTER PLANS for healthcare facilities around the world have never been in such a complete state of readiness.

The TECHNOLOGY in healthcare facilities across the USA has never been as up-to-date

The BUSINESS SYSTEMS in healthcare facilities have never been as scrutinized, integrated and current as they are now.

The CLINICAL USER appreciates the technology they have at their fingertips a little more now, taking it less for granted.

These are quite significant achievements!

The General Services Administration (GSA) in conjunction the Intergovernmental Advisory Board (IAB) has published *"The Many Silver Linings of the Y2K Challenges."* The report is available at http://policyworks.gov/intergov. The conclusion provides a nice summary from the government's point of view.

I think we would all rather be writing lists of benefits of the Y2K effort than trying to identify the disastrous consequences of what could have happened if the effort had not been made. Our efforts were targeted at reducing risk to the patients and the organizations we serve and, based on the outcome, I would have to say that we did a great job.

FDA Panel Nominations

Jennifer Ott, Jennifer.Ott@tenetstl.com

The FDA is again looking for nominations to medical device classification panels and committees.

Please contact me if you are interested.

Thanks, Jennifer

HAZARD REPOSITORY

Jonathan A. Gaev, Jgaev@ecri.org

I want to make you aware of an interesting database located at http://www.mdsr.ecri.org.

It is called *Medical Device Safety Reports-Lessons Learned.* The MDSR is a repository of medical device incident and hazard information independently examined by ECRI. It is a collective look at the types of problems that have occurred with medical devices and lessons learned over the past 30 years. It focuses on the steps that medical device users can take to prevent or reduce medical device risks to patient care and healthcare worker safety.

We at ECRI would certainly appreciate any suggestions that you have. Also, I would like to know about databases of medical equipment problems, hazards or recalls that you have in your countries. I am familiar with the databases in the USA, Canada, France, UK, Australia and New Zealand

and need to learn more about Latin America and other countries.

Ed. Note:
Jonathan Gaev is Director, International Programs, ECRI.
http://www.healthcare.ecri.org
He may be contacted at the following coordinates:
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Plymouth Meeting, PA 19462, U.S.A.
Tel: +1 610 825 6000 X5368
Fax: +1 610 834 1275

Web Trappings

BJ Morgan, jmorgan@ibm.net

As many of you discovered, the ACCE Website was down for several days, starting December 27th. This was due to a failure of the website host's primary domain server. That meant that it was impossible to access several thousand websites although they were still up. In a long e-mail, the host company apologized for the crash and outlined the rather extraordinary steps they took to make sure that the same problem will not reoccur in the future.

ACCE Awarded WHO Contract

The World Health Organization has awarded the American College of Clinical Engineering a contract to develop an Advanced Clinical Engineering Workshop Syllabus and an outline for an ACEW Handbook. Jim Wear and Joe Dyro will serve as editors of the two documents. ACCE Members who have served as faculty on previous ACEWs will supply content material. The project is expected to take several months with ACCE members volunteering their time to assist in the production of the material. Proceeds of the work will be directed to the ACCE treasury.

The project is timely as WHO has had many requests for workshops in the immediate future with five planned for this year alone.

It is expected that the documents will facilitate the presentation of a cohesive, comprehensive workshop. The documents will enable ACCE members who serve as faculty members for the first time to quickly assimilate the material required to be presented. It is therefore meant to assist both faculty and participants.

ACCE Board Highlights

Wednesday, December 15, 1999

Caroline Campbell, cac1@mhg.edu

Minutes approved with minor editorial changes.

President's Report

Secretariat Proposal: ECRI has denied the request for Secretariat assistance with an expressed concern about the availability of necessary resources. However, Mark Bruley's wife has expressed an interest in the bookkeeping and accounting functions. Our options are to look for another company, third party, or seek volunteers from the membership. A motion was approved to solicit assistance from the membership.

ACTION ITEM: Jennifer will review the proposal & develop timelines for completion of the various tasks & estimate an hourly labor rate for completion of those tasks.

World Congress on July 21st & 22nd, 2000: Faculty is currently in development. PAHO/WHO will assist in travel expenses for faculty. $1,000 will also go to ACCE coffers. International Committee will review submitted papers for the CE track.

WHO/Infratech Proposal: Infratech is an electronic discussion group for infrastructure and technology for health services. Al Jakniunas has been acting as the ACCE representative to coordinate the listserv updates, database, and website. A new agreement is forthcoming that requests ACCE to appoint a coordinator and provide the coordinator with internet access and laptop computer to perform the following duties: data design and collection for current and new members; creation of a knowledge base; development of welcome message including communications protocols; keywords to be used in the subject headings, recognition of the roles of ACCE, WHO-PAHO/AMRO, appropriate disclaimers regarding commercial activities and institutional responsibilities. In exchange for fulfilling these responsibilities, WHO will pay ACCE $5,000 for the first year, and $2,000 per year in subsequent years. Al has agreed to act as the coordinator going forward. A motion was approved to accept the agreement pending official review and signing.

ACTION ITEM: Jennifer will review proposal upon receipt.

Dr. Sood has made contact with Dave Simmons regarding the potential for developing clinical engineering activities in India. Dave has responded to Dr. Sood with information and has also been in contact with Andrei Issakov of WHO about an ACEW in India sometime in the next two years.

ACTION ITEM: Jennifer to follow-up with Dave Simmons on progress.

Dave Simmons has been trying to track down a contact for Doctors without Borders but has had no success.

ACTION ITEM: Jennifer to follow-up with Dave Simmons on progress.

Dave Simmons attended a meeting with representatives of the Office of Clinical Standards and Quality, Health Care Finance Administration on December 8 to determine what consideration, if any, was being given to the application of ISO 9000 into the Medicare "Conditions of Participation". HCFA is already funding Peer Review Organizations, which are increasingly interested in ISO 9000 as a method for creating metrics for monitoring Medicare recipient organizations' performance and accountability. The outcomes of that meeting, which clearly indicate HCFA's intent to utilize ISO 9000 concepts and methods to improve processes, were the following:

- HCFA representatives agreed to a series of meetings to establish an ongoing dialog regarding ISO 9000 and to potentially involve other organizations and health care providers that express interest in ISO 9000 applications in that series of meetings.
- HCFA indicated an interest in participating in the American Society for Quality/Health Care Division Standards Committee activities.

An e-mail was distributed to the ACCE membership requesting assistance with the teleconferences, web site maintenance, and the *ACCE News*.

ACTION ITEM: Jennifer to contact David Denham regarding his interest in the webmaster position.

ACTION ITEM: The Members at Large should contact Jennifer by January 7th indicating their interest in one of these three projects.

George Johnston attended a Refurbishment Medical Equipment Exhibit in Mexico in October which focused on after-sales maintenance and operating supplies. At this meeting, the International Association of Medical Equipment Remarketers advised attendees that purchases of refurbished equipment should be made only from members of their organization. George believes that this organization is taking advantage of their position on AAMI's advisory board for their own benefit and questions what ACCE's role be in the equip refurbishment issue. A motion was approved for George to make some initial contacts on this issue.

The medical error issue is in the forefront with the government. ACCE would like to develop a white paper on the issue. Several members have expressed an interest in assisting in this project including Al Jakniunas, Tom Bauld, Marv Shepherd, Binseng Wang, Ethan Hertz, and Matt Baretich.

ACTION ITEM: Jennifer will forward pertinent web sites for Board to review.

Marv Shepherd has requested that ACCE co-sponsor the Technical Iconoclast session at AAMI. A motion was approved to co-sponsor any session chaired by an ACCE member.

ACTION ITEM: Brian Porras to contact AAMI to review.

Brian Porras submitted a proposal for Board review that recommends creation of the National Institute of Biomedical Imaging and Engineering within the National Institutes of Health. Contact with congressional members is easy to accomplish via the Academy of Radiology Research's e-mail system.

ACTION ITEM: Jennifer will distribute relevant information to the membership.

Various ACEWs are in various stages of planning including in the Dominican Republic in March (Frank Painter, coordinator), Estonia, Latvia, or Lithuania in September (Al Jakniunas, coordinator), Nepal in November. Future areas include Panama, Colombia, India, and Russia. A motion was passed to advertise the need for faculty and coordinators among the membership and that all members should be free to participate regardless of status as long as the member can demonstrate competency to the coordinator.

PAHO has funds ($6-7k) for Chicago World Congress & for the Dominican Republic ACEW that need to be released by the end of the year. PAHO wants to release to ACCE. There is an existing account at Oregon Health Sciences University to cover ACEW expenses. Bob Morris of OHSU will discuss with Antonio Hernandez.

ACTION ITEM: Henry to investigate potential tax issues.

24X7 requested input from ACCE for their *Buyer's Guide*. The midyear meeting in Michigan was submitted.

Jim Wear and Andrei Issakov had a discussion in Cape Town concerning ACCE developing workbooks for the ACEW under contract for $10,000. The transfer of money was to occur before the end of the year but ACCE has not received the contract or further contact.

ACTION ITEM: Jim to contact Andrei Issakov.

First Vice President's Report

Joint meeting between AAMI & Michigan Society for Clinical Engineering to be held this winter.

Second Vice President's Report

ACCE Symposium: Brian Porras and Caroline and working with AAMI to request an all day session.

Brain has been unsuccessful to date in contacting Wayne Morse, but will continue his efforts.

ACTION ITEM: Brian to contact to ferret out Wayne's interests. Get list of previously available ACCE products.

Secretary's Report

Working with Tim Ritter at ECRI to determine if ECRI still has original copy of the *"What is ACCE?"* brochure. A motion was approved to have more brochures printed.

Telemetry: The FCC has received 50-100 responses from hospitals to their Public Notice only 3 of which occupied the 450-460 MHz. Anticipate putting telemetry on the FCC's March agenda with intent of issuing final ruling by end of March. Hugh van Tuyl will actually write the ruling.

Treasurer's Report

Renewals are being received and forwarded to Caroline for update of the membership database.

The P&L Report was reviewed.

Put additional funds in a CD? Recommend waiting until January to purchase since coffers will be replenished with membership renewals. Consider next Board meeting.

Preliminary 2000 budget was reviewed with recommended changes.

ACTION ITEM: Henry to incorporate recommended changes and re-issue budget for review.

CCE Committee Report

The ICC Task Force met on Dec. 2. Mike Miller said he hadn't heard any proposals so AAMI has done nothing. ACCE's goal is to resurrect certification with improved promotion. Ray Zambuto, Tom Judd, Ted Cohen are assisting Frank. This group to was requested to develop and present a related business proposal to Board. In the interim, discussions with ASHE continue.

Education Committee's Report

Last teleconference coming up tomorrow with Ode Keil, anticipated income of $11k with $7k in expense.

Advocacy Committee's Report

Shirts for the advocacy award winners have been distributed.

International Committee's Report

5,000 International Brochures will cost $361.50 to print and $30 to ship in bulk quantity of 5,000. Sam Miller to look for brochures. A motion was approved to fund re-printing if the brochures cannot be located and for the Secretary to retain the brochures.

40 letters have been sent to applicants for dues sponsorship project. Have received 2 responses (due today) & 3 names submitted by sponsors. Have agreed to extend deadline so that it can be advertised via the newsletter.

Health Tech 2000

Proposing to drop session that was to be chaired by Larry Hertzler / Bob Morris since no speakers were obtained. Replace with session on medical errors.

ACCE News

Have You Paid Your Dues?

All ACCE members are urged to check their records of dues payment. If you have not paid your ACCE membership dues for 2000 please do so now. Send your check made out to ACCE to Treasurer Henry Montenegro at 7911 79th Way, West Palm Beach, Florida 33417.

Calendar of Events

- AIMBE 9th Annual Event, March 3-4, 2000, Washington, DC.
- Orthopaedic Tissue Engineering, April 13-14, 2000, Boston, MA. (888) 670-8200.
- HealthTech 2000, April 30-May 3, 2000, Dallas, TX. (401) 766-4142; www.expotrac.com.
- DITEC 2K - Diagnostic Imaging Technology Education Conference, May 24-26, 2000, Cleveland, OH. (440) 519-1555, http://www.ditecnet.com.
- Third ACCE Symposium, San Jose, CA. June 3, 2000. Contact Brian Porras at (704) 733-5056, brian_porras@premierinc.com.
- AAMI 2000 Conference & Expo, June 3-7, San Jose, CA. 800-332-2264, ext. 233; education@aami.org.
- 5th Annual Conference of the International Functional Electrical Stimulation Society (IFESS 2000), June 18-20, 2000. http://www.smi.auc.dk/aalborg2000/ifess.
- Neural Prostheses VI: Motor Systems Conference (NP 2000), June 21-24, 2000; http://www.smi.auc.dk/aalborg2000/np.
- Health and Design, June 2000 in Stockholm. www.ki.se/ipm/dchp2000.
- World Congress on Medical Physics and Biomedical Engineering, July 23-28, 2000, Chicago, IL. http://www.wc2000.org.
- EPSM 2000 – Annual Medical Physics and Biomedical Engineering Conference, Nov. 5-9, 2000 Newcastle, Australia. http://www.newcastle.edu.au/department/ph/epsm2000.html.
- 10th International Conference on Biomedical Engineering, Dec. 6-9, 2000, Singapore. http://www.nus.edu.sg/DB/icbme/.
- 23rd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, October 25-28, 2001. Istanbul, Turkey.

Third ACCE Symposium

Frequency Allocation Issues in Medical Telemetry

On Saturday, June 3, 2000, a panel of experts from government, the medical device industry, and the hospital community will lead a discussion of the upcoming changes to the landscape of medical telemetry. New provisions are being made to provide for some protection of medical telemetry systems from unwanted interference. However, these changes promise to have a major impact on device manufacturers and the hospital community. This program will address a variety of medical telemetry issues, with ample opportunity for audience participation for questions and answers, brainstorming, and alternate points of view. The formal program will run from 8 AM to 4 PM.

- Brian Porras – Premier, Inc. (Host and Moderator)
- Caroline Campbell – Washington Hospital Center (user perspective)
- Steven Juett – Baylor University Medical Center (user perspective)
- David Paperman – Texas Children's Hospital (user perspective)
- Hugh Van Tuyl – Federal Communications Commission (regulatory perspective)
- Don Witters – Food and Drug Administration (regulatory perspective)
- Mary Beth Savary Taylor or Curtis Rooney – American Hospital Association (AHA Task Force perspective)
- Stan Wiley – Spacelabs Medical (vendor perspective)
- Steve Hannah – VitalCom (vendor perspective)
- Mike Dempsey – Agilent Technologies (vendor perspective)
- James Brinsfield – GE Marquette (vendor perspective)

This symposium is being held as part of the AAMI 2000 Annual Meeting
San Jose McEnery Convention Center

When registering for AAMI, indicate that you wish to attend the ACCE Symposium on Saturday, June 3, 2000

For information contact AAMI, 703-525-4890 or Brian Porras, 704-733-5056, brian_porras@premierinc.com