



NEWSLETTER

VOLUME 6 NUMBER 1

MARCH 1998



ANNOUNCING
The 24th Canadian Medical and
Biological Engineering
Conference
&
ACES Provincial Conference

"Assessing the Impact"



June 28 to 30, 1998

Sheraton Grande Hotel
Edmonton, Alberta

For more information see the CMBEC Web Page at
<http://www.cha.ab.ca/clineng/cmbec24/index.html>

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President's Letter ...

by Brandon Beaudry, President

It is my esteemed pleasure to serve as your president for a second year and as such I would like to again thank all the individuals who supported and participated in ACES events in the past year. We are well into 1998 and it is shaping up to be a very unique year for ACES. We have the good fortune this year of being a part of the CMBES National Conference, to play host not only to fellow BMETs, but to various Clinical Specialists from across North America. The ACES Executive is working hard to ensure that our BMETs will gain the maximum benefit possible from this years National Conference through an array of continuing education courses and workshops.

In addition to the National Conference, ACES has planned our regular local Dinner meetings in Edmonton and Calgary. The topic for our first meeting is Magnetic Resonance Imaging with speaker Dr. Larry Filipow, a physicist with the University of Alberta. Dinner is provided, sponsored by GE Medical. Doug Bridgeman, the University of Alberta's MRI Service Specialist will also make a presentation on the technical service aspects of the MRI suite.

Our final meeting this year will take place in late October or early November. Due to the National Conference in Edmonton, we will not hold a provincial conference but instead we will make use of today's technology to host our first "video conference". The latest technology will be utilized to join the Calgary and Edmonton Local Dinner meetings with lectures on Fluoroscopy by Phillips. The video conferencing equipment will be utilized to effect our Annual General Meeting. We will close the evening with a special presentation from a local wine consultant and have an opportunity to sample some of the more popular vintages.

The Alberta Clinical Engineering Society is a society committed to serving the Biomedical and Clinical Engineering community. Our goal is to further the profession of Biomedical and Clinical Engineering by encouraging and enabling open communication between clinical and technical facilities and by creating a network of support provincially as well as nationally. The ACES Executive is working to improve the relationships between our members and other provincial and national societies. We are communicating more and more with our neighbors in BC through IBET. We are researching closer ties with the provincial society ASET and we are working together with the National group CMBES to bring you the experiences of other Technologists and Engineers.

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MEDICAL PRODUCTS

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I encourage everyone to be a part of ACES. Whether you are with a private service company, a supplier of medical devices, working with a provincial Hospital or a biomedical student, ACES is an invaluable resource. The open forums, the educational lectures or events, and the networking opportunities are innumerable. As your president I am always available to discuss ideas for local meetings. If there is a specific topic that you would like to see covered during one of our meetings or if you would like to become a more integral part of the society I can be reached by E-mail at bbeaudry@cha.ab.ca

Winners ...

Congratulations to Bryce Jones & Curtis Yano winners of passes to the Stage West Dinner Theatre for filling in our ACES survey.

1998 ACES Executive ...

Brandon Beaudry	- President	
Sam Itani	- Vice President	
Bill Rutledge	- Treasurer	
Brian Van Skiver	- Secretary	
Denny Mellott	- Chairman	(Communication and Social)
Ron Van Vliet	- Chairman	(Education & Professional Development)
Bryce Jones	- Member	(Communication and Social)
Robin Fair	- Member	

Do Your Part ...

Committee members are needed ! We are currently looking for members to help with ACES events. Volunteers are needed for the Membership Committee, the Fund Raising Committee, the Communication Committee, the Education Committee, the Professional Development Committee, and the Social Committee. Please see the committee descriptions on the webpage and contact the executive members to do your part.

"Nellcor Puritan Bennett Canada offers a variety of Support Services to Biomedical Engineers on the entire product line of ventilators and monitors, including the Datex-Engstrom anaesthesia monitors and gas machines.

We offer Technical Support, Biomedical Service Training Classes, Expedited Parts Delivery, and Biomed Shared Service agreements to suit the needs of your institution. If you want more information, please call our Service Manager at 1-800-263-7530."



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Assessing The Impact ...

The Canadian Medical and Biological Engineering Society (CMBES) will celebrate their 24th Annual Conference (June 28 to 30) at the Sheraton Grande Hotel in Edmonton Alberta.

CMBEC24 will be the premier gathering point for the biomedical engineering community in Canada. It offers a world-wide forum for information exchange amongst researchers and clinicians working in the biomedical engineering field.

The conference will open with a Plenary Session consisting of tutorial presentations highlighting the theme of "Assessing The Impact". Following the Plenary Session, concurrent streams of scientific and technical papers will take place over the next two days. Papers and posters are invited from biomedical engineers, technologists, technicians, medical physicists, clinicians and other researchers around the world for inclusion in the scientific and technical program.

Student members of CMBES are also encouraged to participate in this exchange of scientific information and are invited to compete in a Student Paper Competition. The Conference is an excellent opportunity to gain professional recognition and valuable presentation experience.

For more information please visit the CMBEC 24 website : <http://www.cha.ab.ca/clineng/cmbec24/index.htm>

A Sneak Peak ... CMBES 24 Continuing Education Course List

#1 - Preparing for the Biomedical Engineering Technologist Certification Exam

Date: Saturday, June 27, 1998 Time: 8:00 - 5:00 Location: Sheraton Grande Hotel

Technologists and technicians attending this course will review the materials essential for successful completion of the BMET certification examination. The format of the examination will be discussed, as well as general study tips and techniques that will be helpful in preparing for the exam. Each student will receive a study guide, certification information package, and a booklet containing all of the course materials.

#2 - Plastics and Polymers Repair and Recognition (Hands On Work Shop)

Date: Tuesday, June 30, 1998 Time: 8:00 - 5:00 Location: Northern Alberta Institute of Technology

(Transportation will be provided from the Sheraton Grande for all out of town guests to the course.)

The workshop introduces types and properties of plastics and elastomers commonly used in clinical equipment. An introduction to failure mechanisms is given to develop an understanding of how plastics and elastomer parts fail. Repair techniques are described and demonstrated. Methods for flexible and rigid mould making are described for producing parts to replace those not suitable or economically feasible for repair. The workshop's practical component will involve the student developing skills in a range of repair, mould and part preparation, and various material identification methods.

#3 - Networking Fundamentals (Hands On Work Shop)

Date: Monday June 29, 1998 Time: 8:00 - 5:00 Location: Sheraton Grande Hotel

#4 - PSpice - Electronic Design and Simulation (Software Workshop)

Date: Saturday June 27, 1998 Time: 8:00 - 5:00 Location: Sheraton Grande Hotel

Software package included. Course reviews the operation of this popular electronic design and simulation software.

#5 - Health Care Information Systems

A review of Dicom and HL7 standards. Along with a clinical Lecture on the Alberta perspective.

Date: Tuesday, June 29, 1998 Time: 8:00 - 5:00 Location: Sheraton Grande Hotel

A workshop which will provide an introduction and overview on health care information systems and communications standards. This overview will come from four experts in their respective areas.

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#6- **Communication in Plain English** (Effective communication and public speaking techniques.)

Date: Sunday June 28, 1998 Time: 1:00 - 5:00 Location: Sheraton Grande Hotel

Methods will be developed which will assist you in the clear and effective exchange of information in a hospital environment. Issues explored will be one on one and group communication and training skills. This is an interactive, multimedia workshop. Effective communication is a key skill to have and used in the majority of our work and personal lives and the better one's ability to communicate, the more effective one can be. Christopher Grabiec has facilitated numerous seminars focused on communications, public speaking, and principles of adult education. He is President of the Dunham Group which specializes in the areas of Marketing, Communications, and Graphics.

#7 - **Medical Device Incident Investigations** (Effective procedures)

Date: Sunday June 28, 1998 Time: 1:00 - 5:00 Location: Sheraton Grande Hotel

The involvement of a medical device in an incident of accident is frequently unappreciated or, in some cases, completely overlooked. But there are always ways to minimize the risk of injury from medical devices, as well as to manage and investigate device-related incidents in a way that serves the interest and safety concerns of patients, hospitals, and device manufacturers. The clinical or biomedical engineering department should be the hospital's focal point and technical resource for rapid and thorough investigation of serious accidents involving medical devices. The course includes mechanisms of injury, equipment design issues, staff training, preservation of evidence, impounding of equipment, inspecting and testing of devices, interviews, third party investigators, and investigation of skin burn incidence.

#8 - **Fundamentals of Ventilators**

Date: Saturday June 27, 1998 Time: 8:00 - 5:00 Location: Grey Nuns Hospital

Familiarizes students with basic pulmonary concepts and terminology. Introduces fundamental theory of operation of ventilator pneumatic components (e.g. regulator, bleeder, flow-valve and electronics). The course will then show how these components are connected to create the ventilator.

#9 - **Anatomy and Physiology** (Cardiovascular & Respiratory Systems, and Diagnostic Measurements)

Date: Tuesday June 29, 1998 Time: 8:00 - 5:00 Location: Sheraton Grande Hotel

Learn the knowledge and skills necessary to describe basic cardiovascular measurements (ECG monitoring, ST segment analysis, Blood Pressure, and Hemodynamic pressures). The course will review the respiratory measurements of respiration, SpO2 and ETCO2. The course will also identify appropriate interventions for common patient monitoring problems.

#10 - **Advanced Web Design**

Date: Monday June 28 & Tuesday June 29, 1998 Time: 8:00 - 5:00 Location: The Micro Computer Institute

Searchable Database Design, Maintenance and Advanced Form Scripting, Java Introduction and Sample Applets will be included.

#11 - **NT Work Station**

Date: Monday June 28 & Tuesday June 29, 1998 Time: 8:00 - 5:00 Location: The Micro Computer Institute

A 2 Day in-depth look at NT Workstation

#12 - **Health Care Standards**

Date: Sunday, June 28, 1998 Time: 1:00- 5:00 Location: Sheraton Grande Hotel

The course will discuss health care standards from different viewpoints. Firstly you will learn about how health care standards are being developed internationally by the different standards organizations (ISO, IEC, EC, CSA, etc.) and how these groups are relating so that there will be common international standards. You will learn about health care quality standards and their application. As well general equipment standards will be discussed and the equivalency of different standards.

Watch the CMBES Web Page for changes, updates, and prices.

<http://www.cha.ab.ca/clineng/cmbec24>

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Regional Updates ...

Calgary Regional Health Authority Update

submitted by Bryce Jones

Consolidation continues in Calgary for the delivery of services at the remaining acute care facilities. Clinical Engineering is striving to consolidate its activities by coordinating its resources across the Region. This means the movement of BMETs to various sites as workloads dictate and capitalizing on economies of scale for persons with specific skills. Presently CE employs thirty two BMETs who are responsible for all of the Region's acute care clinical equipment and most of the Region's imaging equipment. A major hindrance to consolidating CE services is the lack of a Region wide service database. Work progresses on identifying our needs for a suitable Clinical Engineering Maintenance Management Information System (CE MMIS). CE hopes to have such a program functional for 1999.

Ted Vitanov's able tutelage will end in April. He leaves behind a legacy of hard won successes in an austere era that threatened the very existence of Clinical Engineering. The achievements CE made during the Regionalization process are testament to Ted's dogged tenacity. The CRHA CE community sends its best wishes as Ted moves on.

Replacing Ted as Regional Facilities Leader for CE is Randy Craig. Randy joins the CRHA from the Ottawa Civic Hospital, where he led that hospital's CE program. Randy is no stranger to tumultuous change as he leaves a province that is now facing what Alberta experienced three years ago.

Capital Health Authority Update

submitted by Bill Rutledge

The CHA has been in the news lately (along with other jurisdictions across Canada) as we struggle to cope with influenza season and long waiting times in Emergency Departments on each site. The problems have been attributed to a shortage of long term, medical and intensive care beds. A Service Plan Review Committee has been looking at the service pressures and have approved the re-opening of a number of long-term beds as well as 30 medical, 30 surgical and probably 6 ICU beds at the Grey Nuns Hospital. Unfortunately, funding these beds is still an unanswered question that has hampered the planning for a specific date. Only sixteen medical beds have been funded for immediate opening to date. Clinical Engineering is making a case to restore a 0.5 FTE position lost when Grey Nuns' ICU beds were transferred to the "referral hospitals" in 1995.

In other news, the Alberta government has approved that Leduc and some of the other small communities bordering the Edmonton region will be joining the Capital Health region officially as of 1 April 1998. Negotiations are underway with the government, Crossroads Health Region and the affected communities to settle funding and ownership issues.

The entire Capital Health Region will be visited by a team from the Canadian Council for Healthcare Accreditation from April 13 to 24 in what will be the largest accreditation exercise ever undertaken by the Council. Clinical Engineering has been participating on a team looking at "Management of the Physical Environment", which has been quite a challenge given the range of facilities and approaches developed at all the sites.

Closer to home in the Clinical Engineering "world", we're continuing to take an active role in two important regional initiatives. We are awaiting confirmation of capital funding for an evaluation and possible standardization of infusion pump technology and supplies in the region. Reducing high maintenance costs and the advantages of multi-channel capabilities are among the other benefits being sought. We are also gearing up to coordinate the "medical equipment" component of our region's Year 2000 compliance response plan.

At the University site, we have received some funding for additional positions to support expansion in three areas: Renal Support Service, Respiratory Support Service and the Infusion Pump/Wheelchair Distribution Service. We have welcomed Danny Ivanc, David Stone (to a full-time position), and Mark Blowers respectively to our staff.

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At the Royal Alexandra site, we have been able to upgrade our desktop computers to Pentium technology with some unbudgeted external revenue and we have been waiting patiently for a few weeks for I.S. setting up our Windows NT environment for us. University and Caritas sites are planning for a similar migration over a longer period of time for budgetary reasons. We continue to make inquiries and observe demonstrations of alternative maintenance management software products that will be suitable for a regional standard.

Naitline ...

submitted by Ron Van Vliet

Hard to believe it's been a year since I last contributed an article to the ACES Newsletter. Since that time, the class of 1997 graduated, and almost all have found excellent positions in industry.

Our class of 1998 is fourteen strong and is currently about mid-way through their last semester. It's a very diverse group, comprised of individuals from a variety of backgrounds. And, this class also boasts the highest female-to-male ratio (3 to 11) in the eleven years that our program has been in existence! Once again, our program is relying heavily on our local hospitals for their weekly field practice, guest lectures and equipment loans. Due to the larger class size we initiated a field practice at the Cross Cancer Institute this year (thanks Ralph and company!) And, as an interesting side note, our first year class includes two medics from the Canadian Armed Forces who have chosen NAIT to provide their biomedical training. With a military base recently relocated to the Edmonton area, we expect this relationship to continue in the future.

This year we were fortunate to acquire additional equipment through donation (a Hewlett Packard "Clover series" ICU monitoring network, complete with central station, telemetry and arrhythmia monitoring capability). Thanks to our anonymous donor ? you know who you are! The availability of this equipment takes us one step closer to the establishment of a fully-equipped biomedical laboratory, allowing our students to practice their troubleshooting on our equipment, not yours! Also acquired this year at a near give-away price was a ten station version of HECS V.4.0 (thanks Ed Stevenson and ECRI!) We hope to be successful in acquiring a dedicated computer network this fiscal year, giving us the capacity to offer a full-featured equipment control system at each student lab-station.

In other news, thirteen Edmonton-area biomedical technologists completed the first half of NET394 - Network Fundamentals in December of 1997. The second half of the course is slated to run in March-April. Dave Burry, our resident BET/NET expert, is teaching this course and by all accounts it has been extremely well received. The costs of this training have been defrayed through the application of training credits, earned in exchange for the support CHA area biomedical staff give our program every year. Our supporters outside the Capital Health Region are welcome to take advantage of training credits as well -- please give me a call to discuss the details. This is the first time, by the way, that we have offered diploma-credit training to BMETs working in the field. This means that those BMETs completing NET394 in the spring are one course closer to acquiring an NET diploma, should they wish to pursue such training. As time goes by, NAIT will offer more upgrade opportunities to BMETs working in the field ? making use of on-line technologies which allow BMETs to study without interrupting their careers whenever possible. We'll keep everyone posted as this develops!

RFP, RFQ, RFI What are they?

submitted by Alexander Sackiw, B.Sc.

RFI?...Radio Frequency Interference?

Well no, these 3 letter acronyms are very common to the salespeople who supply hospitals with equipment and services. They are "Request for Proposal", "Request for Quotation" and "Request for Information". I will attempt to provide an overview of why they are important to you the Biomed or Engineer. This is the first of a 3-part article on what we call RFP's.

About 1 to 3 years before equipment is actually purchased, something should be happening and YOU SHOULD BE INVOLVED! This is the time budgets are prepared and "Wish Lists" are being created by managers to be included in their budgets.

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What does a Biomed have to do with budgets. Well, who else knows the equipment status better than the Biomed. You have been documenting your maintenance (parts, down-time, costs) and should have the capability to present a report to the Nursing Manager about how much money this equipment costs to maintain. If you have a good working relationship with the salesmen, you have also been privy to brochures and pamphlets on new equipment. This is the time to identify new technology or equipment and have salespeople provide pricing so a budget for equipment can be included. Too many times the equipment is left out, not on purpose but because of lack of information. How many managers do you know that can tell you when the "end of support dates" are for their equipment, let alone that there is such a thing. You can keep the manager informed by writing memo's to them detailing facts, concerns or making suggestions as to the technical side of patient care. Don't wait, do it now!

I recently sent a memo outlining the cost of maintaining cast cutting saws in the ortho department and recommended replacing the oldest ones when they needed repairs. The manager called me and said "Too bad I didn't know this 2 weeks earlier, I just did the budget for that area". Opps, I boo booded, it happens! This little tidbit of information was just what she needed to support her equipment budget request. She didn't have it and next year her staff will still be suffering with those "time consuming, expensive to repair" old saws. I don't know about you, but someone here recently said "I'm tired of fixing old broken-down equipment". How about you?

Now that you know why you should be involved, what is this RFP anyway? Well, it's usually a standard form supplied by the purchasing department that may start like this: "You are invited to submit a proposal for the provision of the goods and services or both described in this Request for Proposal." An RFP is NOT an offer to buy, lease or hire goods, property or services. It can be cancelled at any time, in whole or in part, for any reason whatsoever without incurring any liability upon anyone. In other words, it is not a tender. It does not mean you are definitely going ahead with this purchase, only that you want proposals and pricing so you can decide. In some cases, certain sections of the RFP were deleted from the final purchase order due to lack of funds. In other cases, vendors have made suggestions which vastly improved on the original RFP and they were subsequently adopted.

In the next section, I will break down the RFP into four parts. The Invitation, Definition of terms, Instructions and finally Special Instructions. Then we will attack the technical evaluations based on the quotes we receive.

In the third and final section, we will deal with the pitfalls of contract negotiations and outline the basics of "How to do it Right!"

Newsletter Advertising

Are you interested in advertising your company and services or do you have items you would like to sell? Then placing an advertisement with the ACES newsletter is an excellent way to reach the Alberta Clinical Engineering community. In addition, all newsletters are posted to the World Wide Web. Your ad will therefore also be available to the international clinical community.

Advertising Rates:

One to two lines	\$50.00
5.0cm x 4.75cm space (Half Business Card)	\$75.00
5.0cm x 9.0cm space (Business Card)	\$100.00
10.0cm x 9.0cm space	\$150.00

If you would like to advertise on the ACES newsletter or have any questions I can be reached at:

Denny Mellott
ACES Newsletter Editor

Clinical Engineering
Foothills Hospital Site
1403 - 29 Street NW
Calgary, AB T2N 2T9

Phone: 403-670-1419
E-mail: denny.mellott@crha-health.ab.ca



ACES Proudly Presents:
“Magnetic Resonance Imaging”

THE FOOTHILLS HOSPITAL
March 30th, 1998 3:15 PM to 7:00 PM

3:15	<i>All Participants to gather in lobby of the Coombs Lecture Theatre</i>
3:30	Tour of the New MRI suite in Emergency
4:15	Lecture by Pierre LaForge on MRI Technology in the Coombs Lecture Theatre
5:00	MRI Presentation by GE Medical
6:15	Pizza & Refreshments served at the Garden Nook - courtesy of GE Medical

This ACES event is proudly sponsored by  Medical.

If your planning to attend please contact Sam Itani on or before March 23 :
Phone: 670 - 1419 or Email: sam.itani@crha-health.ab.ca



ACES Proudly Presents:
“Magnetic Resonance Imaging”

UNIVERSITY OF ALBERTA HOSPITAL

Lecture Hall “D”, Room: 2F1.04
8440-112 St., Edmonton

April 2nd, 1998 5 PM to 10 PM

4:30-5:00	<i>Registration</i>
5:00- 6:00	Dinner
5:00- 6:30	Presentation by Doug Ragan Product Manager for GE Medical’s MR Division
6:30- 7:00	Presentation by Doug Bridgeman “Diagnostic Imaging Technical Services in the CHA”
7:00- 10:00	Presentation by Dr. Larry Filipow Physicist and Divisional Director of Radiology and Diagnostic Imaging with the CHA (will include a tour of the MRI Facilities at the University of Alberta Hospital)

This ACES event is proudly sponsored by  Medical.

If your planning to attend please contact Brandon Beaudry on or before March 23 :
Phone: 492 - 6711 or Email: bbeaudry@cha.ab.ca

Membership Application

To enjoy the benefits of ACES and to continue receiving the ACES newsletter and meeting notices, become a member now! Enclose a \$10.00 cheque and return this application with label attached or complete the following form to update your information.

Return to:

**The Alberta Clinical Engineering Society
c/o The University of Alberta Hospitals
Clinical Engineering Room 0D1.00
8440-112 Street
Edmonton, Alberta
T6G 2B7
ATTENTION: Brandon Beaudry**

*Are you reading this but are not on the ACES mailing list, No Problem!
Fill out the requested information and send to the above address.*

ACES THANKS YOU FOR YOUR SUPPORT

*** Members who have not yet received Membership Cards or Pins
Please contact Brandon Beaudry via pager @ 445-6330 or via E-mail at bbeaudry@cha.ab.ca*

Business Information

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City: _____ Province: _____

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Work Ph: (____) _____ Ext: _____

Fax: (____) _____

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Personal Information

First Name: _____

Last Name: _____

Home Address: _____

City: _____ Province: _____

Postal Code: _____ Ph: (____) _____

E-mail: _____

NOTE: Feel free to use this form to
update your information also !

Look for an ACES membership booth at the CMBEC 24 Conference !