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The Alberta Clinical Engineering Society Newsletter

October 31st, 2003

Presidents Letter

by Alex Sackiw, B.Sc,
President

Isn't it interesting how, as the years roll by, we are continuously bombarded by the promise of "The New and Exciting...!" I remember the great promises of mind bending computing technology and the sobering warning that it may all come to a grinding halt due to the impending Y2K Bug. In reality, neither to those two (and many other predictions) actually had the effect that we were all conditioned to expect. Instead, a steady progression of technology and our adaptation to it, is the norm.

So what is changing? Well, if you have been following ACES through the last 10 years, you will see the same trend of progression and improvement. Slow and steady improvements with the minor ups and downs that one can expect from any volunteer organization. But take a look at this year's line-up, ten (10) board members on the executive. With it will come the rewards of such active participation. The new Telehealth Seminar Series is one such improvement. Watch for it, take the time to attend those sessions, there is always something new to learn that you may want to incorporate into your daily routine. Yes, there will be some growing pains using video-conferencing since it is a relatively new technology to us, but it's that same

progression and adaptation to technology that is transpiring here.

In keeping with that trend, there is a new column in the newsletter for the same purpose, "ACES In The Shop". Take the time to read it. I expect you will be impressed...as I was.

In closing, remember to take care of yourself. Jobs change; ACES board members move on, so take advantage of what is being offered this year because you never know what will be available next year.

Letter from the Editor

by Joe Reynolds, C.E.T.

Welcome to my first effort as the new ACES Newsletter Editor. I hope that you will find this issue to be of a comparable standard of excellence that my predecessor consistently published. Thank you Denny for all your help and guidance and your years of service to the ACES Executive!

It is my great pleasure to announce a new column "ACES in the Shop". With your help this will be a continuing column providing tips and product highlights that have proved especially useful to repair or troubleshoot clinical systems. We are looking forward to your contributions to this column. Please route any submissions to president@aces.ab.ca.

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ACES in the Shop

Product review by A.T.Sackiw, B.Sc.
www.stabilant.com
D. W. Electrochemicals Ltd.
Ontario, Canada

IT'S BACK!

As time will tell, everything repeats itself. In this case, a known problem has returned which manifests itself exactly the same way it did 18 years ago! I don't recall if it was nickel or zinc plating, but the symptom appears the same in almost all cases...weird! Let me explain.

Take a piece of equipment; intermittently faulty by all indications. It may turn on and go immediately into a fault condition or it may start up normally, then suddenly stop mid-stream, display flashing or frozen. No matter, there were no concrete indicators to point to the crux of the problem. First thing I was taught to do as a young Biomed was to check the power supply. 80% of all fault conditions were due to those analog power supplies they said. Well, after a year or two in the field, I learned that there was another infamous bug on the board. It was those T.I. "DIP sockets! That silver coloured plating was famous for bad connections. Even many of those earlier DIP chips would have their little silver legs turn black due to corrosion or oxidation. Out came the eraser or fiberglass bristle brush and we'd rub, rub, rub away the problem. This we did every year. Hence the PM schedule that was so important in those days.

Then, to our most hearty applause, came GOLD plating. I'll bet there are younger Biomedics out there who have never seen tinned copper edge-connectors on a board. They have always been gold plated...haven't they? There was a reason for that pricey gold plating and we've never looked back.

Well, in looking back now, I don't like what I see today. Surface mounted

LSI chips, micro-controllers, flash memory cards, all set in "non-gold plated contact", surface mounted sockets. Back too, are the intermittent or bad connection problems of the past. Maybe it's the cost, maybe the newer engineers didn't know about the old problems. Whatever the reason, don't succumb to the frustration of dealing with an old problem without this tidbit of information - "Stabilant 22A". It is Not a liquid gold plating solution but it is one gem of an idea!

This is one of those new technologies we keep hearing about. In this case, It's a Canadian Invention (as so many of them are) and it's called "Stabilant 22". Stabilant 22 is an intriguing "block polymer" which is non-conductive between adjacent contacts while becoming conductive in the close confines and electric field of two conductive surfaces. Limited to applications less than 100 volts, this polymer when diluted 1 part polymer to 4 parts isopropyl alcohol (hence the suffix "A") can be applied directly to the pins of a connector, I.C. or switch contacts. It has oil like lubricating qualities which allow it to self wick onto the contacts themselves (best to apply it directly though). When used in extremely small amounts, it virtually eliminates contact impedance problems. A 15 ml bottle contains about 900 drops. Typically 1 drop is more than enough to treat a wire harness connector or cct. board edge connector. Now I could write pages about the various applications we have used this on and herald the successes, but I urge you to try it for yourself. It's locally available in Calgary and soon, in Edmonton. Contact D. W. Electrochemicals for a list of distributors in your area.

Some further information:

Patented: 1987
Initial use: High end audio equipment.
Useful Frequency Range: D.C. to several GHz.
Useful application life: 5 – 10 years.
Shelf life: 15 years.
Package size: 15ml (recommended), 50ml, 100ml, 250ml, 500ml and 1000 ml.

Price: Approx. \$30.00 for 15 ml bottle kit c/w applicators.
Temperature Range: Decomposes at 220 C (decomposition elements may burn).
Non-Toxic: Ingestion in small quantities causes nausea and stomach upset.
DO NOT USE on: Thin film resistive potentiometers or electrical contacts where sparking occurs.

Calgary Health Region Update

By: Kelly Kobe, CBET, CET.

Well I hope you all enjoyed your summer and are receiving the same enjoyable fall weather as Calgary!

There has been a lot happening in the Calgary Region since the beginning of the year. We have hired two new staff members to replace staff who left the region, welcome aboard to Darren Steidl (RGH) and Natou Kurtz (FMC).

Construction of the new Children's Hospital has begun, it is expected to be completed by 2006. Part of the construction will also see a new overpass connecting the Foothills Hospital to the new Children's Hospital. It was also released last week that the plans for a new health campus to be located at the south end of Calgary should be completed two years early. Phase one is expected to be completed by 2008 and it is to include a 350 to 400 bed acute care hospital. The Region is also proceeding with adding 100 new beds to the Rockyview Hospital and 100 to 150 new beds to the Peter Lougheed Centre.

Some other recent projects, the renovations to CVICU at the FMC are now complete as well as the renovations to the new Burn Unit. Premier Ralph Klein will be here for the grand opening of the Burn Unit on October 29th. Currently at the Peter Lougheed Centre, they are removing the existing MRI to make way for a new one to be installed next week, the PLC

has also purchased a new 16 slice CT Scanner. The Diagnostic Imaging department implemented "PACS" into the Operating Room at FMC last November and just recently implemented it into the PLC and RGH, the ACH will be completed this November. There will be a total of 65 PACS Operating Room Mobile Viewing Workstation in the Region once completed.

The Region has completed equipment evaluations on fluid warmers and on forced air blanket warmers and we are currently looking at infusion pumps and PCA pumps, in the near future we will also be looking at mobile vital signs monitors. We are also trying to receive some ERBE ESU and Gambro Prisma training to be held in Calgary.

Well that's all for now and I would like to wish everyone all the best and a safe upcoming holiday season!

Capital Health Authority Update

by Bill Rutledge, P. Eng.

I noted that the Edmonton Update was missing from our last newsletter and I almost missed the publication deadline again this month. Thank you to our editor, Joe, for being so patient.

There have been a number or personnel changes in the past year that I would like to highlight. Eric Neff joined the Royal Alexandra Hospital team in December 2002 when Homayoun Akhavansafa moved from the technologist bench to the clinical engineer's office at RAH. More recently, Garth Hebert transferred in July from UAH to RAH to fill a newly created position. Two other positions were created late last year to support the growing Renal program. John Twells and Ryan Miller are welcome additions to the Renal team. Corrie Gardner left UAH hospital this past summer to take a position in Kelowna. Her position has been filled by Brian Dust. And finally, Jason Venekamp left

Aramark (formerly Clinical Engineering Solutions) to work at the WW Cross Cancer Institute. Aramark has replaced Jason with Jeff Whiting who has moved into the biomed shop at the Glenrose Rehabilitation Hospital. Welcome to Eric, John, Ryan, Brian and Jeff and congratulations on your new positions to Homayoun, Corrie, Garth and Jason.

April 1 saw an expansion of the Capital Health regional boundary. As of that date, Clinical Engineering officially became responsible for equipment at Stony Plain, Devon, Fort Saskatchewan and Redwater hospitals, as well as a number of additional health clinics and an extended care facility in Morinville. Members of our department, as well as information systems and finance, participated in a physical inventory of all capital assets at these facilities early in the year. We are still in a transition phase from Aspen and Lakeland regions and are negotiating for additional resources to cover the additional costs.

Planning and design for the RAH ambulatory care redevelopment project (including 10 new OR's), the OR redevelopment project at UAH, the Alberta Heart Institute at UAH, and the North Treatment Centre at RAH has been a major time commitment for a number of our staff. Construction is underway on the first two projects, with completion planned for 2004. AHI and NTC are still in detailed design and opening will be a couple of years away.

Chinook Health Region Update

by Kay Henke, R.E.T.

Greetings from the Chinook Health Region in Lethbridge!

I trust everyone has come back from a great summer; summer obviously being but short memory today, as we experience our first real snow storm after all that beautiful weather.

Regionally, we have been busy over the last few months with some interesting activities. A new Medical Officer of Health has been appointed, Dr. Conway Brewerton, who is originally from Southern Alberta, and has returned to the area to serve in the community health environment.

STARS toured Southern Alberta this summer to determine if there was support and interest in having one of their helicopters permanently based in Lethbridge. Although the tour was an unqualified success, much discussion and analysis remains to be done before STARS can commit to establishing a permanent base within our Region.

Biomed-wise, we were fortunate to be able to hire a new Biomed Tech this year, and he has just joined our team this month. Please join us in welcoming David Jahns to the Chinook Health Region. He has come all the way from Edmonton, and (until today), was enjoying the unseasonably warm weather we have been experiencing. He comes to us with Biomed training from NAIT, good ideas and enthusiasm along with electronics experience. He is certainly a welcome addition to our under-staffed and over-worked area!

Equipment-wise, we are currently evaluating adult ventilators for EDPS and video equipment for Day Procedures. A new phone system is being installed as I write this message, and is expected to be up and running next week.

We are gearing up for Take Our Kids to Work day on November 5, next Wednesday. We set up several stations depicting different trades and professions from Engineering and Maintenance, and offer the students some hands-on experiences and some take home goodies. The program has been well received by all for the past 3 years and we are expecting a good turn out again this year. That's all for now, Take care and God Bless.

Peace Country Regional Health Authority Update

by Orrin Stephen

There hasn't been much change up here as far as the Biomed shop here is concerned. Our region has a new name. As part of the consolidation of health regions, our region was merged with regions to the north of us to include: Peace River, Manning, Grimshaw, High Prairie, and McLennen. Fox creek (east of us) also joined us in what was then called region 8. The new name is Peace Country Health. As part of that and other changes, our e-mail addresses have changed to:

firstname.lastname@pchr.ca (eg; my new e-mail is orrin.stephen@pchr.ca). We have been doing regular trips to Fox Creek for PM inspections, but for the time being the new areas to the north of us will keep their arrangements with Biomedical Inspection Services (for those who are unfamiliar with the third party Biomed, in Alberta they are a Biomed group owned by Don McFarlane based out of Edmonton).

I'm pleased to say that we had 100% attendance from our biomed shop for the ACES video conference presentation on Oct. 15 (all three of us).

Whoo Hoo! (Celebrate even the small victories.) I think these are an excellent idea, and I'm looking forward to the rest of the series.

The new special care nursery is under construction and should be ready by sometime next year. Eventually they will be moving us to build an expanded respiratory department, here on the 2nd floor of the Q. E. II. Where we will be going has not been decided yet, but it would be hard to find a place as convenient as our present location across from the OR and beside ICU. Oh well, hopefully we can get some other

improvements instead, like more convenient power outlets and more shelving and storage space. That's all I have for this issue of the newsletter, bye for now.

Northern Lights Regional Health Services Update

by Graham Bruce, C.E.T.

Greeting from the Northern Lights Health Region: Fall 2003.

We are now officially the Northern Lights Health Region, the largest health region in the province. We now have a new Web page, NLHR.CA., so you can check us out.

As of the first of September the long drawn out renovation of the Laboratory Services had been completed and the lab has moved into their shiny new facilities and along with the upgrading of some old equipment from when the hospital ran its own lab, they are full speed ahead. Lots of settling kinks to be worked out but not disruption of service. A "GRAND OPENING" will be scheduled at a later date.

The second phase of this project, the construction of new premises for Health Records got quickly underway and speeds along. Mainly it is the creation of office type spaces with a large filing space in the middle, not nearly as complex as the Laboratory half. Completion is sighted for early November.

September 25th saw the official opening of the new home of Parent Child Resources, on the fifth floor. They have a large play/assessment area and an observation/conference area, along with new office space for all of their staff. They are very happy campers! Thanks go to large Oilsands project and their donations to make it a reality. The space is to be available for use by the Speech and Language department as well.

Mental Health has a new director of services, Ambulatory Care is looking

for a new leader, Building Services has a new Maintenance manager and new Supervisor of Operation (chief power engineer), a new Working Team leader of Respiratory, a new Communications Advisor, a new Director of Finance, along with many new staff faces in nursing and support. Some of these new faces are associated with the creation of our new region. The amalgamation of services is proceeding as smoothly as can be expected, despite the long distance between our location and the High Level area.

The annual Blueberry Pancake Breakfast at the hospital was a huge success and the Blueberry Festival was also a success although it was touch and go if there would even be a festival at all. We are now into our United Way campaign activities, as well as gearing up for our highly successful FESTIVAL OF TREES campaign, which is always a big fundraiser.

On the Biomedical Services front.

The new video scope system has arrived but is still in the boxes, this brings our total to two, both Pentax. They won the evaluation/price contest but the nursing staff seem to prefer the Olympus system but what can you do when others make the decisions.? The department (me) is looking for two new pieces of test equipment, a new "ELECTRICAL SAFETY ANALYZER" and a new "ELECTROSURGICAL ANALYZER" and would appreciate the input of all fellow technologist opinions on which ones to get. My existing units are deemed obsolete by the service support agency. Apologies to Alex. The emergency department has converted over to hard shell SPO2 sensor from the soft rubbery Philips ones, which did not seem to last more than about six months (not the 18 months claimed by Philips in their latest "PROBE" newsletter.)

I would be interested in hearing from any facility that use the Baxter infusion pumps. Mainly their views on the new Colleague series vs the Flogard 02 series usage in general nursing areas.

We currently are using Colleague 3 in ICU; they love them and trials of Colleague in Pediatrics. I have spoken with Lethbridge but would like to hear from others. Need to provide input on which course of action to follow, move towards the new line or continue with the "02" series as the "01" series units drop out of services. Looking long term!!!

Murmurs have it that Emergency is looking to acquire a 12 lead ECG unit. Anyone with suggestions, opinions, warnings, or others, just let me know.

Send all communications to new e-mail: gbruce@nlhr.ca

Hoping you find this read of interest, about the going on in the LARGEST HEALTH REGION IN THE PROVINCE. Look forward to hearing from any of you.

Your colleague
Graham Bruce

CFB Edmonton Update

by Tom Reid

The news on the military front is the change of personnel.

Kari Salo has been promoted and transferred to Halifax. Paul Beyette has moved to Ottawa. New to Edmonton is Warrant Officer Stacey Alcock. I hope to get Stacey around to meet some of you in the coming year.

The military techs here have also ventured to New Jersey for technical training on the impact ventilator which is widely used throughout the Canadian Forces.

Also of note is the fact that we have a military BMET in Afghanistan at present. His replacement in the new year will be Cathy MacDonald (NAIT 2000) grad. The heat and the dust are the biggest problems in keeping medical equipment running at the Field Hospital.

Tom Reid
CFHSC Edmonton

NAIT Update

by Roy Sharplin

Last April we hosted our annual industry mixer and had a group discussion regarding our programs PC Repair course and our Networking course; this discussion ended in a plan where by I was to survey the biomedical industry for suggestion on the content of these courses. In May, all the Electronics related programs met and decided to keep the PC repair and networking courses identical for all electronics programs (electronics, network engineering, computer engineering, and biomedical). To this end, Serge Belley was assigned the task of reorganizing the PC repair course for this year. Serge has been working towards this goal and has completely rewritten the course. Also, the school has upgraded and modernized all the hardware in our labs. So far this appears to be a big improvement. I am hopeful that we will be able to modernize our networking course next year.

The Biomedical Program received capital funding during the summer and purchased new electrical safety analyzers; we now have one analyzer for every 2 students. This will make our biomedical labs run much more smoothly.

This fall, as usual, we began working with our new students in our 1st year class. We have 24 students and they have been enthusiastic and motivated with their studies so far. Our second year class is very large, 23 students, this is the largest second year class ever in our programs history. The second year students and I are looking forward to the 4th semester.

Regards,

Roy Sharplin
Program Coordinator
Biomedical Engineering Technology
NAIT

Attention Students:

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David Thompson Regional Health Authority Update

No update available at time of publication!

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Advertising Rates:

Business Card \$ 75.00
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If you would like to advertise on the ACES newsletter or have any questions please contact:

Alex Sakiw

E-mail: president@aces.ab.ca

Member Feedback & Recognition

ACES is an organization dedicated to our members and the field of Clinical and Biomedical Engineering. As a member of ACES you are entitled to provide your input into the activities of the committee. Please forward all ideas and comments directly to a member of the ACES Executive. For a list of your executive please see the beginning of this newsletter or visit the **ACES Web Page @** <http://www.aces.ab.ca>

Special Recognition

If someone you know has made an outstanding contribution to the field of Biomedical or Clinical Engineering please nominate that person by sending an email message outlining that contribution to president@aces.ab.ca.

Telehealth Video Presentation Series

ACES has embarked on a new era in its mandate to share information. The Alberta Telehealth video-conferencing system allows one presentation to be broadcast to the entire Western Canadian Biomedical Community at once. Clinical Engineers and Biomedical Technologists from Western Canada's large cities, to those in relatively remote centers can partake in a one hour technical presentation geared directly toward their front line activities.

The first of four presentations spearheading this endeavour on Oct 15, 2003 was "Clinical" Computer Viruses and Spam email...How can you deal with them. Planning for the next presentation is underway. The topic will address the handling of contaminated equipment as it comes out of isolation rooms or from general wards containing infectious diseases. We all know about the SARS incident in Toronto and how Clinical Caregivers were double gloving and gowning, using special N95 personally fitted masks, wiping everything with disinfectants...my gosh, so much attention devoted to protecting those people...but what, if anything did you hear about Biomed's responding to equipment needs...and repairs. Obviously that information is not in the news reports. What happens when you have to open up the case on a device where the patient had T.B. or Hepatitis or a SuperBug? Is there anything living in that dust we blow off the boards? Should we be concerned?

ACES wants to find and share that information with you and your peers. Watch for the next Telehealth Video Presentation tentatively scheduled for early December, 2003.

JOIN ACES !!

To enjoy the benefits of ACES, and ensure that you continue to receive the ACES newsletter and meeting notices, Become a member! Complete the following Information form, and return with payment in the amount \$10.00 (free for Students) to:

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