NCBA News

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Brian Poplin, CBET
NCBA President

Inside This Issue:

President's Forum

Keynote Intuition

Have you ever wondered how some technicians seem to have a knack for troubleshooting? What about those individuals that "lay hands" on a piece of equipment and it starts to work? I have always chalked it up to talent or luck, but maybe it's something else.

About a month ago I was beginning to stress over the impending symposium and my inability to land a "spectacular" keynote speaker. Sure, there were some ideas and thoughts tossed around, but no one that really challenged our paradigms. I wanted to give something back to the NCBA as president, and landing that thought provoking speaker was my plan. The keynote for me has always been about that far flung idea, or small piece of insight that makes you leave the talk thinking; "Wow, I never would have thought of that".

As the pressure began to mount my search was becoming ever more futile. Then a good friend had an idea. That's when Dr. Richard Broughton came into the picture. A world renowned paraphychologist, Dr. Broughton could possibly be that speaker with the "Ah Hah" to impress a couple hundred biomeds. So, with a lunch conveniently arranged by my friend I set off to meet the famous doctor.

Well, at this point you know where my story is going. Dr. Broughton impressed me so much, that our hour lunch turned into an afternoon "Ah Hah' fest. When he finally agreed to provide the keynote for our symposium I couldn't have been more thrilled. I am sure that you will begin Tuesday at Pinehurst with an awesome keynote thanks to a good friend, Paul Blue.

You see, my term as president is coming to a close and the recurring theme of my tenure is thanking a fantastic group of individuals for always coming through. No matter what anyone says, the president position is by far the easiest on the board. When you are surrounded by this much talent and positive performance, success is a destiny. Now, with that said, the fun is just about to begin. By the time you get this, the symposium should be a week or so away. I hope you have a great time, and thanks to all of you that have been a part of the team this year. It has been my pleasure and a great honor to serve as president for 2001. Enjoy the show!

Brian

2001 Board of Directors

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NCBA News is an information service of the North Carolina Biomedical Association (NCBA). It has a distribution of about 500 and is published six (6) times per year. Articles and ads are due on or before the first day of even months. The newsletter is mailed on or about the first day of the odd months.

YOUR HELP IS NEEDED!!! Articles of interest to our readers are constantly needed and sometimes in short supply. If you have written any articles that may be of interest to our readers, submit it to Newsletter Committee Chairman, Glenn Scales

2001 Standing Committees

Rules and Bylaws
Brian Poplin (Chair), Glenn Scales, Obie Godley, Mark Renfroe

Nominating Committee:
Linda Leitch (Chair), Tommy Ballard, Charles Worrell

Finance Committee:
Charles Worrell (Chair), Jim Tripp, Brian Poplin, Dan Harrison

Membership Committee:
Diane Aker (Chair), Sally Goebel, Obie Godley, Linda Leitch

Education Committee:
Dan Harrison (Chair), Sonny Richards, Mark Renfroe, Helen Jones

2001 Special Committees

Apprenticeship:
Brian Poplin (Chair Person)

Newsletter Committee:
Glenn Scales (Chair), Mark Sonntag, Diane Aker, Sally Goebel, Tommy Ballard, Mike Howard

Scholarship Committee:
Sonny Richards (Chair), Lane Rushing, Dan Harrison, Linda Leitch, Charles Worrell

Vendor Coordination:
Ken Logan (Chair), Charles Worrell, Tommy Ballard

Hotel Coordination:
Helen Jones (Chair), Sonny Richards, Ken Logan, Charles Worrell, Glenn Scales

Public Relations:
Brian Poplin (Chair), Glenn Scales, Dan Harrison

Internet Committee:
Linda Leitch (Chair), Glenn Scales, Mark Sonntag, Sally Goebel, Mark Renfroe

Professional of the Year:
Brian Poplin (Chair), Tommy Ballard, Dan Harrison, Helen Jones, Mark Renfroe

Historian:
Glenn Scales (Chair), Charles Worrell, Obie Godley, Sonny Richards

NCBA Board Meeting Minutes - October 19, 2001
Pinehurst Resort & Hotel

Attending Board Members:

Glenn Scales, Linda Leitch, Brian Poplin, Mark Renfroe, Charles Worrell, Helen Jones, Dan Harrison, Diane Aker, Boyd Campbell, Tommy Ballard, Sally Goebel

Guests: Ken Logan, Obie Godly, Jim Tripp

The meeting was called to order at 10:10 am by President Brian Poplin.

Approval of the previous Board Meeting minutes: Linda presented copies of the August Board meeting minutes to the Board members and guests. After reviewing the minutes, Helen Jones moved to accept the minutes as submitted. Mark Renfroe seconded the motion and the Board unanimously approved the minutes.

The following reports were presented and discussed by the attending Board members.

Treasurer's Report: Charles handed out the profit & loss statement ending October 2001. The total income was $27,583.02 and the total income expenses are $7,366.29. The board reviewed the budget report all the expenses are correct thru September 2001. Charles pointed out the revenues for vendor registrations are greater than last year. Boyd made a motion to accept the report as submitted. Helen Jones seconded the motion and the Board unanimously approved.

Membership Report: Diane handed out the annual membership report. No changes have been make to date. Mark made a motion to accept report as given. Dan seconded the motion and the board unanimously approved.

Education Report: Dan reported that there was interest in holding a CBET Certification review class in April 2002 at one of the two Community Colleges, date and location to be announce later. Mark made a motion to accept the report as given. Glenn seconded the motion, the board unanimously approved.

Scholarship Report: Brian reported for Sonny Richards. Sonny has verified receipt of forms and procedures by both schools and received a verbal report from both David Wilson and John Noblitt that each will have 4 applicants for scholarships. Sonny will be forwarding copies to the Scholarship Committee.

Rules & by-laws: No report given.

Newsletter: Glenn handed out a draft of the next newsletter. After the Board reviewed they are to submit articles by November 15. Brian thanked Glenn for job well done, again. Mark made a motion to accept the report as given. Boyd seconded the motion, the board unanimously approved.

Nominating Committee: Linda handed out the current board position flow chart and explained the chart to the Board. Persons in red indicate 1st year in term and black indicates 2nd year in term. The bold line between names indicates the end of two consecutive 2 year terms. Linda handed out a list of the candidates for elections at the general board meeting. Charles made a motion to accept the report as given. Dan seconded the motion and the Board unanimously approved.

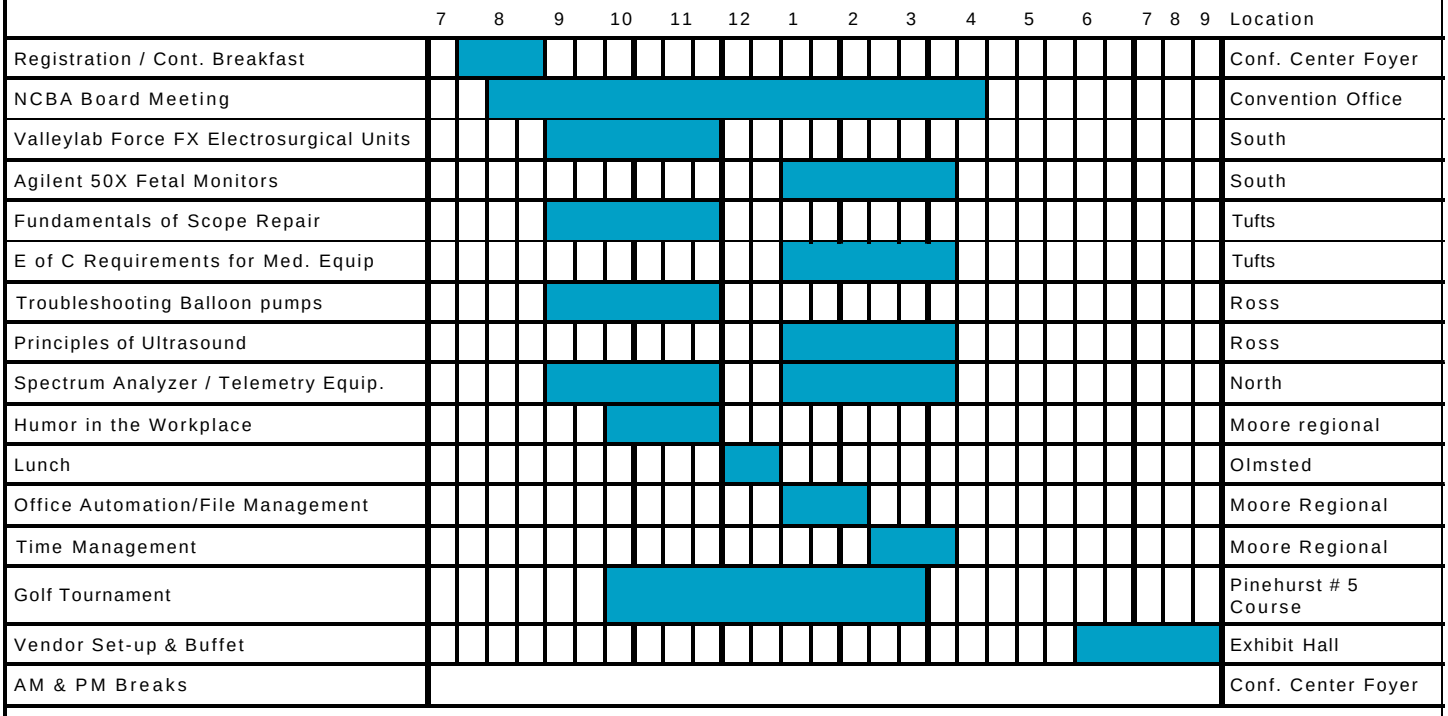
Internet: Glenn stated the information on web site is current and up to date. The hotel/golf/registration forms are downloadable. Glenn discussed the issue of the design of the site, but the Board decided not to initiate any design changes at this time. Glenn talked about the changes to make to web site design in 2002. Dan made a motion to accept report as given. Helen seconded the motion, the board unanimously approved.

Professional of the Year: Brian stated that he's received only one applicant for this award but the deadline is October 31. The money has been received for both awards from Hill Rom and Spacelabs. Dan made a motion to accept the report as given. Helen seconded the motion, the board unanimously approved.

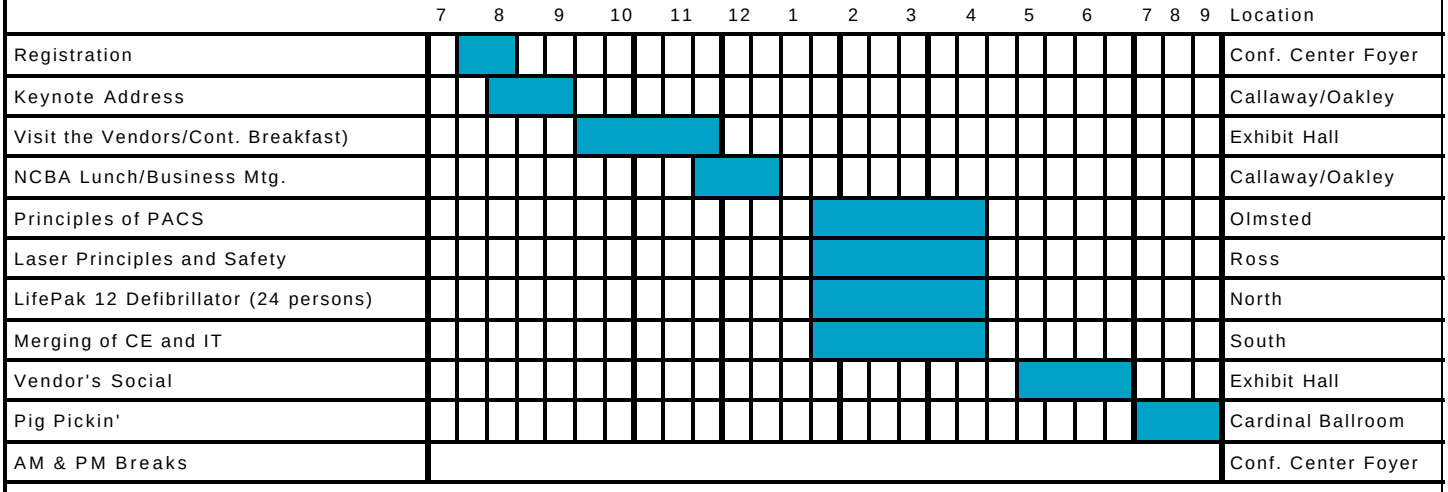
Continued on page 10

NCBA 2001 Symposium Event Schedule

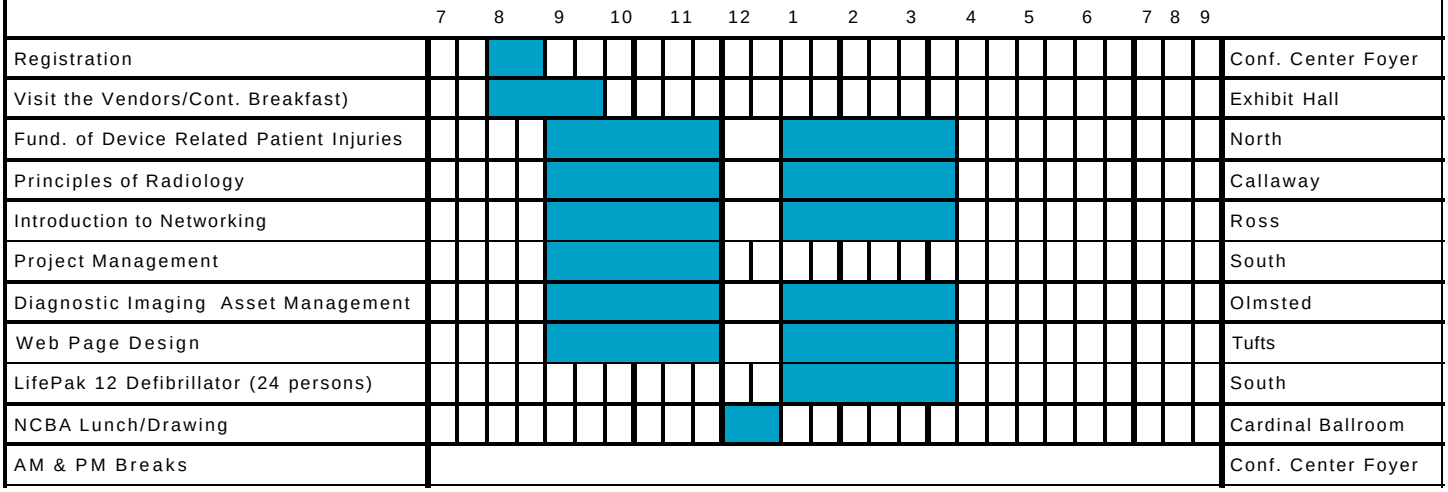
Monday, December 3, 2001



Tuesday, December 4, 2001



Wednesday, December 5, 2001



Joint Ventures - JCAHO and You
Patient Safety Standards by Matt Baretich

Early last year the Institute of Medicine published "To Err is Human: Building a Safer Health System." This landmark report estimated that medical errors cause 44,000 to 98,000 deaths annually in U.S. hospitals. Although there is some controversy regarding the actual number of deaths caused by medical errors, there is a strong consensus that patient safety can and should be improved.

There is also general agreement that improvements in patient safety will *not* come from blaming healthcare providers and exhorting them to do better. Instead, we need to improve the *systems* in which patient care is provided.

At the heart of a systems approach to patient safety is coordination of all system components—the patient, clinicians, support personnel, medical technologies (devices, drugs, medical and surgical procedures), and the environment in which patient care is provided. The systems approach includes proactive analysis to anticipate ways a system can fail. It also includes root cause analysis of actual failures, with an objective of improving the system to avoid future failures.

In response to concerns over patient safety, JCAHO has revised numerous standards throughout the accreditation manual. The majority of these revisions, which take effect in July 2001, are relatively minor. The major revisions are in the Leadership chapter, which now mandates that "leaders ensure implementation of an integrated patient safety program throughout the organization" (LD.5).

Surprisingly, none of these revisions affect the Infection Control or Environment of Care standards. Nosocomial infections (those acquired in the hospital) contribute to thousands of deaths annually. Clearly, infection control is a fundamental factor in patient safety. And, as we all know, the Environment of Care standards have always addressed patient safety as well as safety for staff and visitors. Providing a safe and effective environment for patient care is fundamental to nearly all of the EC standards.

We have already seen JCAHO add infection control concerns to the EC standards—control of airborne and waterborne pathogens, for example. And next year JCAHO will revise EC.3.2.1 to add IC and other concerns to the planning process for construction and renovation. As a result, facility engineers and infection control practitioners have begun to coordinate their efforts. That's good news for patient safety.

Effective January 2002 the EC standards will be revised so that activities related to patient safety are integrated into the hospital-wide patient safety program. EC.4.1 will assign responsibility for this integration to the safety officer. EC.4.2 and EC.4.3 will address the flow of information.

JCAHO emphasizes that its patient safety standards "do not require the creation of new structures or 'offices' with the organization." However, it's not yet clear how hospitals will coordinate all of their patient safety activities without adding complexity to their systems. Most hospitals seem to be adding patient safety oversight to an existing group such as the Quality Committee or Safety Committee. Some hospitals regard patient safety as a clinical issue and assign it to a medical staff committee.

As each hospital decides how to manage its patient safety program, it is important for hospital leaders to consider *all* components of the organization that affect patient safety. That means that those of us responsible for the Environment of Care must be involved. Now is the time to make our voices heard.

Matthew F. Baretich, P.E., Ph.D., is President of Baretich Engineering, Inc., a consulting firm based in Fort Collins, Colorado. His areas of practice include safety management, facilities management, and medical equipment management. Joint Ventures articles can be downloaded from www.baretich.com.

ENHANCING PATIENT SAFETY

The Role of Clinical Engineering

A white paper prepared by the American College of Clinical Engineering

The American College of Clinical Engineering has drafted a white paper to their colleagues within the healthcare delivery system on the subject of the role of clinical engineering professionals in enhancing patient safety. The message is "… that ACCE, and clinical engineers, individually and collectively, will take a leadership role in pursuing opportunities for clinical engineering to contribute even more effectively in the area of patient safety".

The American College of Clinical Engineering was established in 1990 to represent and advance the profession of clinical engineering, both in the United States and internationally. During that time it has acted both independently and in cooperation with other organizations to achieve its objectives. To read the article in its entirety, go to the ACCE web site at http://www.accenet.org/

Focus on Laser Safety

Most of us have seen the laser warning sign bearing the advice: "Do Not Stare at Laser Beam with Remaining Good Eye". We have a pretty good sense that laser beams can be dangerous. But what is it about lasers that makes them hazardous, and more to the point, how can we avoid a serious injury when working around lasers? The answer to these questions lies in the unique properties of laser light and some special considerations associated with laser systems.

LASER stands for Light Amplification by Stimulated Emission of Radiation – a fancy name for a process that can concentrate more light energy into a tiny spot than any other known light source, including the sun. This ability makes lasers a very valuable tool, and enables the more powerful laser beams to ignite combustible materials, burn skin, and injure eyes.

While output power gives the most obvious indication of a laser's hazard, other aspects need consideration. In particular, the beam's penetrating ability and mechanism of damage depends on the laser light's wavelength. Wavelength is generally expressed in nanometers [nm] or micrometers [µm]; visible light occupies the region of the electromagnetic spectrum from 400 nm to 700 nm. Invisible lasers (i.e. operating outside the 400 nm – 700 nm range) cannot be seen but can also be quite dangerous. The eye very effectively focuses wavelengths between 400 nm and 1400 nm, thus increasing the irradiance (light energy per unit area) by a factor of 100,000 and making the eye uniquely susceptible to injury by lasers within this wavelength range. Shorter wavelengths (ultraviolet light) and longer wavelengths (far infrared) aren't similarly concentrated by the eye but can still cause damage.

How can you tell which lasers are the most dangerous? Fortunately, all lasers sold in the United States in the past few decades must be labeled with the "hazard class". The hazard classification scheme has five categories, which can be summarized as follows:

Class 1 cannot, under normal operating conditions, produce a hazard.

Class 2 not normally hazardous, but may present some potential for hazard if viewed directly for extended periods (like many other light sources).

Class 3a with a CAUTION label normally would not injure the eye if viewed only momentarily (within blink response time) with the unaided eye, but may present a greater hazard if viewed with collecting optics. Class 3a lasers with DANGER labels can exceed permissible exposure levels for the eye but still pose a low risk of injury. They may present a hazard if viewed using collecting optics (e.g. microscopes).

Class 3b can produce a hazard if viewed directly. This includes viewing of reflections off mirror-like surfaces.

Class 4 can produce a hazard not only from direct or mirror-like reflections, but also from diffuse reflections. Such lasers may produce fire, eye, and/or skin hazards.

This hazard classification scheme alerts us that class 3b and 4 lasers pose the greatest danger and therefore demand the most caution. In addition, non-beam hazards (e.g. electrical shock, fire, etc.) can be deadlier than beam hazards. How can we protect ourselves from these hazards? While the specific precautions will depend on the situation, here are a few general guidelines:

- Warning signs: should be posted outside any areas where class 3b or 4 lasers are operating, alerting you of the power and wavelengths involved.
- Eye protection: laser protective eyewear should be stamped with the wavelength it is designed to protect against, as well as a protection factor called the OD [stands for optical density] at that wavelength. Ensure that you are wearing the proper eyewear for the laser(s) that's operating, and contact your site's laser safety officer if you have questions.
- Electrical shock: observe all appropriate precautions when servicing high voltage laser power supplies. Avoid allowing conducting liquids (e.g. saline) to spill or pool near power supplies. Practice good cord management (avoid trip hazards, etc.) and repair or replace and damaged insulation.
- Fire: avoid the use of flammable solvents in the area of the laser beam or power supply. Minimize the amount of combustible material around the laser beam target.

Ben Edwards, Laser Safety Manager
Duke University Medical Center
Durham, NC

Ben Edwards will be teaching a class on Laser Fundamentals and Safety on Tuesday, December 4th at the NCBA Symposium. This should prove to be an excellent presentation.

NCBA Board of Directors Candidates

The nominating committee has been working very hard over the last couple of months looking for individuals who would run for the Board of Directors. The Nominating Committee found seven members who expressed interest in serving on the NCBA Board of Directors for 2002-2003. The Nominating Committee feels they have found seven outstanding nominees. The nominees are:

Dale Allman works with Premier and has been the western NC area manager for Clinical Technology Services. Dale is a past Board member and has served as President.

Tom Barnes works with Premier and is the Technology Manager at the UNC Healthcare System for the past five years. Tom earned his Bachelor of Science Degree and has been involved the biomedical field for 20 years or more. Tom is currently a member of AMMI.

Jack Davis is the Director of Biomedical Services at Columbus County Hospital. Jack retired from the US Air Force after 25 years of service. He earned his degree from Alamance Community College.

Parker Foster has been employed at Duke University Medical Center for the past two years as a Senior Biomedical Equipment Technician. Parker came to Duke from Biomedical Equipment Rental & Sales after nine years of service. Parker is presently the technical advisor on a research study project in the Department of Anesthesia focusing on motion artifacts rejection in pulse oximetry.

Linda Leitch, Duke University Healthcare System, is a Senior Biomedical Equipment Technician for the past 11 years. Linda has served on Board in the role of Recording Secretary for the past two years. She's the chairperson of the Nominating, Golf, and Internet committees. Linda is presently pursuing a Bachelors degree in Business Administration.

Carley Parker has been employed at Raleigh Community Hospital for the past two and one half years. He's a Certified Biomedical Technician in the Clinical Engineering Department. Carley is presently pursuing a Bachelors degree in Business Administration.

Mark Renfroe, Wayne Memorial Hospital, is the Manager of Clinical Engineering. He as been involved in Biomedical Engineering for the past 12 years and was certified in 1995. Mark serves on the NCBA Board for the past two year as a general board member and serves on the Education, Rules & By-laws and Professional of the Year committees.

David Wilson is the Program Head for the Biomedical Equipment Technology program at Stanly Community College. David graduated from Stanly Community College in 1987 and has earned his Bachelor degree in Business Administration.

All of these individuals have a thorough understanding of the challenges and opportunities facing the NCBA Board of Directors. The nominations are still open for anyone interested in serving a two year term on the Board of Directors. Please contact Linda Leitch at (919)681-4293 or any Board member.

Changing Standards for Medical Equipment

UL544 and UL 187 vs. UL 2601

Do I Need To Read This? If you are involved in Hospital Engineering, Biomedical Engineering, Administration, Purchasing, or Contract Services; or, if you are an Electrical Inspector, Engineering Firm, or Electrical Contractor, YES!!

There are specific regulations and laws that can affect you and the requirements of your position. It is possible you may not know these changes have already been published, and like many regulations you may be affected without advance notice.

What Is New? UL 544, Medical and Dental Equipment, and UL 187, X-Ray equipment, are being discontinued, and will no longer be valid for product certification. Starting January 1, 2003, all new products will be evaluated to UL 2601, the internationally harmonized Standard for Medical Electrical Equipment.

When Should I Consider This? For Biomedical Engineering and Hospital Engineering departments, this timeline creates a "window" for getting non-certified equipment Field Labeled to UL 544. Many healthcare organizations own smaller facilities with non-certified equipment, or own older equipment for which a Listing or Field Evaluation was never performed. This January 1, 2003 deadline allows these organizations and facilities time to get this non-certified equipment Field Evaluated by a Nationally Recognized Testing Laboratory.

For Electrical Inspectors and Electrical/General Contractors, this creates a deadline for acceptance of medical and x-ray products for new construction or facility relocation, that is, when electrical permits are applied for by hospitals, clinics, doctor offices and convalescent facilities. For products already Field Evaluated to UL 544, the equipment will still meet the minimum requirements for safety until January 1, 2005. Non-certified products will need to be evaluated to UL 2601 after January 1, 2003.

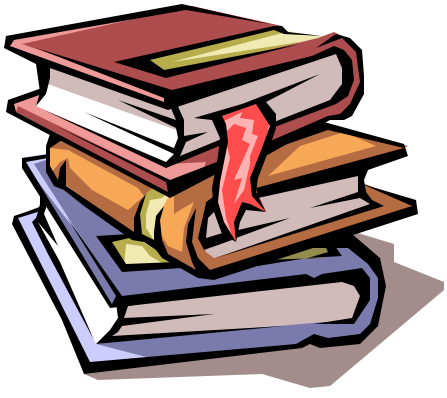
Manufacturers of these categories of equipment will have to make some quick, and possibly tough decisions. Medical and x-ray products now being manufactured and sold throughout the nation and Canada may be subject to considerable design changes in order to comply with UL 2601. "CE" marked equipment and other non-certified products, (Yes, companies are still selling non-certified medical and x-ray equipment!), will need to be certified to UL 544, or UL 2601, depending on overall plans for that product. In other words, equipment could still be certified to UL 544 (Up until January 1, 2003), but in 2005 they would have to be modified to comply with UL 2601. Many manufacturers will most likely choose to certify their equipment to UL 2601, for acceptance past January 1, 2005. After this date, UL 544 and UL 187 product certifications will be withdrawn by the testing laboratories.

Some History? Product Certification Standards have undergone many changes over the years. In the US, Underwriters Laboratories was, for many years, the only Standards writing body for electrical product safety certification. In Europe and Eastern Europe, a completely different set of Standards were written and used for product certification, governed by ever changing Laws (Directives). These Standards are written and administered by the International Electrotechnical Commission, referred to as IEC Standards. In an effort to work towards consistency across the globe, Standards committees have made significant progress in the last few years. These changes will have considerable impact on manufacturers and facility owners, in this case, owners and manufacturers of Medical, Dental and X-Ray equipment.

UL 2601 is based on IEC/EN 60601, and is the first attempt to create a medical equipment Standard for both the US and Canada, and will also make comparisons to IEC 601 much easier. Unfortunately, this change will require manufacturers of medical equipment to update their design processes, and in some cases, to re-design existing products.

Many pieces of older equipment are still very valuable, and expensive to replace without a budget that anticipates these changes. If you interact with these facilities and manufacturers, let them know that help is available. Your local testing laboratory representatives will be ready to assist, and help plan for the future.

This article was submitted by Gregory R. Smith with MET Laboratories in Raleigh, NC. Greg has been a long-time supporter of the NCBA and will again be exhibiting as a vendor at this years Symposium in Pinehurst, December 3-5, 2001.



Microsoft Word Power Tips
by Glenn Scales, CBET

Format Documents for Other Word Processors

If you're creating a document in Word 97 or Word 2000 that you plan to share with users of another word processing program, you can do more than save the document in the other program's file format. A little-known feature in Word lets you fine-tune a document to look the same in the format of another word processing program as it does in Word.

To set up a document for another word processor, select *Tools, Options* and click the Compatibility tab in the Options dialog box. Drop down the "Recommended options for" list and select the word processing program the recipient will use. You'll see specific features of that program checked in the Options list. If the exact version of the recipient's word processor isn't on the list, choose the closest version.

Take this step before you begin working on the document to see it, while you create it, the way your recipient will see it. Finish up by using *File, Save As* to save the document in the other program's format.

Bullets

Tired of the same old boring bullets in your bulleted lists? It's simple to add a touch of creativity to your memos and letters by customizing the bullets you use in Word.

First, create your list of items. Then, instead of creating a bulleted list the normal way (by clicking the bullet list icon on the toolbar), select Format, Bullets and Numbering. Click the Bulleted tab in the dialog. The dialog box contains several bullets to choose from. Click the bullet you want to use, then click OK to lock in your change.

If none of the bullet selections appeal to you, you can change the character that makes up any bullet set. Select any of the bullet choices, then click Customize. In the Customize Bulleted List dialog box, you can pick a character from any font on your system. Click the Bullet button, select a new character to use as a bullet, then click OK to make the change.

To pick characters from another font set, click the Font button. The default font is Wingdings, which has the most bullet-like characters, but you can pick any character from any font.

Indenting Text in Table Cells

Have you ever tried to tab-indent text inside a table? If so, you've probably noticed that pressing the Tab key in a table doesn't produce the same result it does elsewhere in a document—your cursor just jumps to the next cell. Some sly users press the spacebar several times to create the illusion of a tab. But here's a more elegant solution: In all versions of Word, press *Ctrl-Tab* to indent text to the next tab location.

Find Without the Dialog Box

If you want to perform extended searches of a Word document without the Find dialog box constantly on top of your text, press Ctrl-F to initiate a Find command. Enter the text string and press Enter. Once the first instance is found, press Esc to close the dialog box and then press Ctrl-Alt-Y to continue finding the text string without the dialog box. You can also click the blue Down Browse button on the bottom of the vertical scroll bar.

Tab Techniques

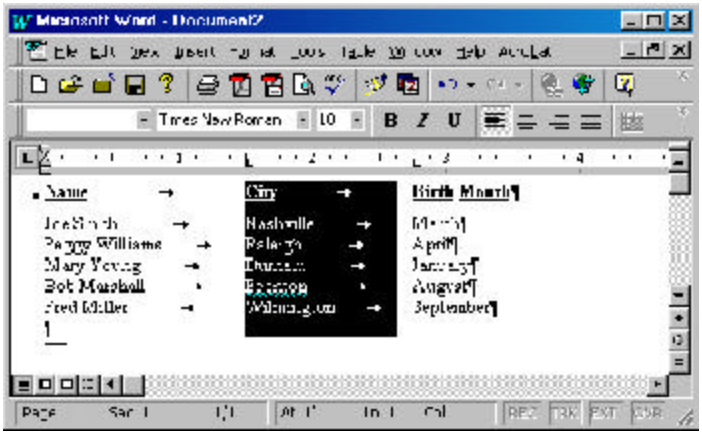
Find the exact position of a tab by simultaneously clicking on it with both left and right mouse buttons. This displays measurements from both margins. With the buttons held down, you can drag the tab to a new spot and the displayed measurements will change as you drag the tab marker.

You can also change the tab alignment and other tab settings by double-right-clicking the tab marker. This displays the Tabs dialog box, where you can specify the precise tab position and select a leader style. In Word 97, double-clicking anywhere in the ruler displays the Page Setup dialog box (another very useful shortcut).

Rectangular Text Selection

There are times when the normal manner that Word selects text just doesn't do what I need. When you click and drag the mouse, you will select all the text from the starting point to the point at which you release the mouse. However, if you have text arranged by tabs, and you only want to select the first "column", you're just stuck, right? Not so with MS Word.

First, hold down the Alt key and then click at the beginning of the text you wish to select. Drag through the portion of the text you wish to select, then release the mouse. You will see that you have selected a specific rectangular area [as shown below]. Once selected, this area can be copied, cut, deleted or formatted as you would with any selection.



BOD Minutes continued from Pg. 3

Old Business:

Regional Symposium 2003: Charles informed the Board about his progress with a regional meeting between neighboring states. Charles has been in contact with the Presidents from the state organizations but they will have to present the information to their board members.

Checking Account: While Charles was investigating the checking accounts, it would be in the best interest of the NCBA to change the account to a sweep checking account. The Board will look into this at next meeting.

Symposium Planning:

Hotel Planning: Helen stated she and Charles met with the hotel director this morning. She explained to Board the changes to make on the Monday schedule. Changes were made to some classroom locations and the lunch location. Helen confirmed that the Board members will stay in the same location in the hotel as last year. The menu is still being finalized. The Board discussed the Wednesday lunch menu. The Board is scheduled to arrive Sunday by noon to start working on symposium packets.

Education: Dan has finalized the class schedules for the symposium. Dan will work with Helen on the audio/visual needs for speakers. Brian informed the Board that the keynote speaker will be Dr. Richard Boughton, the author of "Parapsychology: The Controversial Science" and he will be sponsored by Phillips Medical. Thank you Phillips Medical.

Vendor Relation: Ken Logan reported that 40 booths had been sold as of October. Four booths were purchased at last year's price. There are 48 booths still available. Ken informed the Board that he will not be able to continue next year as Vendor Coordinator and Brian thanked Ken for his great service to the NCBA as Vendor Coordinator.

Membership: Diane reported that she has received the new name badges. She bought a sample for Board to see. She informed the Board that the cost of neck chains was too high for consideration. She would continue to look for a vendor sponsor. She has not received any individual registrations forms to date.

Finance: Charles informed the Board that the total room count was 310 room nights and as of this meeting we had booked at 96% of our room liability for the 2001 symposium. Charles handed out the 2001 symposium revenue projections showing the amount of revenue received for symposium. He will continue to update the Board though email.

Bags, Shirts and Golf: Obie Godley has received this year's shirts and they are very nicely done. Everyone should be pleased. The projected cost is $25 each. Obie stated that this year's bags are on the way. He should have them by mid-November. Linda reported that the golf outing will be held at course number 5. The number of registrations was low so far for this year, maybe the cold weather has something to do with it. But, it still early and the deadline is October 20th.

Seminar Planning:

Dan stated that the CBET exam review will be held in April 2002, with the location and date to be announced. Dan is working with several vendors and manufacturers on setting up stand alone classes for 2002. He said he has had good responses about scheduling these classes.

New Business:

AMMI: AAMI will have a booth at this years symposium. The board decided to join AMMI as an organization, the cost is $100. The Board decided that the designated representatives for the NCBA would be President, Vice President and Newsletter Editor. Boyd made a motion to join AMMI. Sally seconded the motion and the Board unanimously approved.

CD Interest Rates: Charles informed the Board with the interest rates is at 2%, that Board should consider moving the CD's into something else. Charles stated other ways to use the money; including changing over to bonds. The Board will consider this at the January meeting.

Honorary Lifetime Members: The Board considered a nomination for an honoraty member. The Board decided at this time to table the decision.

Adjournment: Mark Renfroe moved to adjourn at 2:30 pm. Sally seconded the motion and the Board unanimously approved.

Respectfully Submitted,
Linda K. Leitch
NCBA Recording Secretary

NCBA Symposium Preview

Fundamentals of Device-Related Patient Injuries

Human injuries associated with medical devices has been casually addressed at the NCBA Annual Symposium on several occasions. On each occasion, it was apparent that time was too short to adequately address the topic. Because there was significant interest in the techniques for determining the cause(s) of these injuries, at the 2001 Symposium we will spend a day learning these techniques by analyzing 15 different, but real, Case Studies that involved patient injury. The attendees will first receive a one-page description of an adverse event investigated by the presenter. From their experiences, the attendees will attempt to analyze each case and come to a conclusion as to the direct and root cause(s) of the event. After a thorough discussion, a formal analysis will be provided. Case Studies will include an analysis of a mechanical injury (causing death) that occurred when an O_2 tank was pulled into the "doughnut" of an MRI, severe lip and tongue burns to a patient during a tonsillectomy, an oxygen fire that occurred during throat surgery, and twelve more.

Marv Shepherd will be presenting the topic, "Fundamentals of Device-Related Patient Injuries" on Wednesday, December 5th at the NCBA Annual Symposium

LifePak® 12 Class

Along with the new advances in defibrillation technology, comes more depth testing to ensure proper operation of this critical life support technology. Medtronic Physio-Control will be presenting an overview of the LifePak® 12 Defibrillator/ monitor and testing requirements to validate proper operation. This presentation will consist of a block-diagram circuit description, disassemble and re-assemble procedures and Performance Inspection Procedures (PIP) including calibration, electrical safety requirements and battery maintenance.

Lane Rushing is a member of the Board of Directors and a Past President of the NCBA. Lane will be presenting a class on the LifePak Defibrillator at the Symposium.

New Product Announcement

Sencore Introduces the LC103/STA260 Industrial Component Testing System

Sencore Inc., the leading manufacturer of electronic service test instruments, announces the introduction of the portable, battery operated LC103 – Capacitor and Inductor Analyzer and STA260 Power Semiconductor Tester. The two products team up to create an Industrial Component Test System that lets you dynamically and accurately test capacitors, inductors and power semiconductors including IGBT's and SCR's.

Sencore's Industrial Component Test System measures and analyzes capacitors for all of the ways that they fail including value (1 pf to 20 F), equivalent series resistance, dielectric absorption and leakage up to 1,000 volts applied for a true indication of the capacitor's performance at the component's working voltage. The Industrial Component Test System measures capacitors for value and equivalent series resistance both in and out of circuit eliminating the need for removing the component from the circuit to make the test.

The Industrial Component Test System dynamically tests power semiconductors including IGBT's, triacs, SCRs, diodes, FETs, and Bipolar transistors at full working voltage. The Industrial Component Test System automatically applies the proper gate/base signal to turn on three leaded power components for analysis. Additionally it tests these components for leakage with up to 1,000 volts applied for identifying high voltage shorts (shorts that other testers miss with a much lower applied voltage).

The Industrial Component Test System dynamically analyzes inductors for value (0.1 uH to 20 H) and with the patented ringing test. The Ringer test helps you isolate shorts and opens in transformers that other testers miss. The inductor value measurement can be made both in and out of circuit.

The Industrial Component Test System accessories includes a chip component test lead, component holder, and adjustable test probe for testing surface mount components in circuit.

SCHEDULE of NCBA BOARD of DIRECTORS MEETINGS for 2001

April 27, 2001, Time: 10:00 a.m.
Rex Hospital, Raleigh, NC
Host – Tommy Ballard, Ph: 919-784-2127

June 22, 2001, Time: 10:00 a.m.
UNC Hospital, Chapel Hill, NC
Host – Sally Goebel, Ph: 919-966-6911

August 24, 2001, Time: 10:00 a.m.
Wayne Memorial Hospital, Goldsboro, NC
Host – Mark Renfroe, Ph: 919-731-6077

October 19, 2001, Time: 10:00 a.m.
Pinehurst Resort, Pinehurst, NC

December 3-5, 2001, 8:00 a.m.
2001 NCBA Symposium
Pinehurst, NC

January 11, 2002, 10:00 a.m.
NC Baptist Hospital, Winston-Salem, NC
Host – Helen Jones, Ph: 336-716-612

February 8-9, 2002
Annual NCBA Board of Director's Retreat
Crown Reef Hotel, Myrtle Beach, SC
http://www.crownreef.com

Board Meetings are open to the NCBA Membership. Please plan to attend.

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