



## President's Forum



Helen Jones, CBET  
NCBA President

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History is full of tales of people from the earliest times forward who, in order to commemorate an event or person of great significance, would erect some memorial so that others would know of that event or person. These memorials took the form of a pile of stones or a totem or an historic mile marker. The North Carolina Biomedical Association is fast approaching our own milestone- the 25th year of getting together, exchanging ideas, and learning more about the business we share. One of our memorials is this thing we call the NCBA Annual Symposium and Equipment Exposition. Every year the board has worked to make the classes the most relevant, the facilities the most amenable, the schedule of events the smoothest, and the sausage biscuits limitless. What is a huge event today started with a handful of technicians who got together for the first time 25 years ago to help each other learn more about the medical devices that they maintained.

The equipment that biomed work on has changed. Yesterday's cutting edge technology is sitting on the loading dock of the hospital waiting to be today's recycled metal.

Troubleshooting techniques have changed. We don't tap on vacuum tubes with pencils anymore. Oscilloscopes with discrete probes and temperamental synchronizing properties are yielding to laptop computers and interface software that can run a complete diagnostic procedure through one cable.

The technicians have changed. Mechanical skills, specific knowledge and a willingness to be of assistance to one's customers used to be enough to meet the hospitals' needs. Today's biomedical professional still has to be mechanically inclined, knowledgeable, and willing but has had to stretch to be as sophisticated in their approach to fixing the equipment as the equipment they maintain is in its function.

**Continued Pg. 4**

# 2003 Board of Directors

## 2003 NCBA Officers

### President:

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## 2003 At-Large Board of Directors

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800-825-1786 – Business  
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828-726-2263 – Business  
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## 2003 Standing Committees

### Rules and Bylaws

Helen Jones (Chair), Mark Renfroe,  
Glenn Scales

### Nominating Committee:

Sam Wright (Chair), Helen Jones, John  
Noblitt

### Finance Committee:

Linda Leitch (Chair), Dale Allman,  
Charles Worrell

### Membership Committee:

Christina Fleming(Chair), Obie Godley,  
Mark Renfroe

### Education Committee:

Dan Harrison (Chair), Boyd Campbell,  
Linda Leitch, Sally Goebel, John Noblitt

### Apprenticeship:

Helen Jones (Chair)

## 2002 Special Committees

### Newsletter Committee:

Glenn Scales (Chair), Boyd Campbell,  
Sally Goebel, Dan Harrison

### Scholarship Committee:

Helen Jones(Chair), Dale Allman,  
Christina Fleming, Linda Leitch

### Vendor Coordination:

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John Noblitt, Charles Worrell

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Glenn Scales, Jim Tripp

### Public Relations:

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John Noblitt, Sam Wright

### Internet Committee:

Glenn Scales(Chair), Dale Allman,  
Mike Howell

### Professional of the Year:

Helen Jones (Chair), Dale Allman, Dan  
Harrison, Linda Leitch, Sam Wright

### Historian:

Glenn Scales (Chair), Obie Godley,  
Charles Worrell



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 odd numbered months. The newsletter is mailed on or about the 15<sup>th</sup> day of the odd numbered months.

While the NCBA makes every effort to assure that its content is accurate, articles are the products of individual authors and the NCBA is not responsible for the content.

NCBA News intends to disseminate information and ideas to its subscribers. While the NCBA News accurately reflects the source of the articles, the content is of variable quality and validity. The Newsletter Committee will attempt to verify all articles, but neither the Editor nor the NCBA is responsible for information.

**YOUR HELP IS NEEDED!!!** Articles of interest to our readers are constantly needed and frequently in short supply. If you have written any articles that may be of interest to our readers, submit it to Newsletter Editor, Glenn Scales, at editor@ncbiomedassoc.com.

# NCBA Board Minutes Friday, September 12, 2003

## ARAMARK CTS — Charlotte, NC

Helen Jones called the meeting to order at 10:15 am. Meeting minutes were reviewed from the May 16<sup>th</sup> meeting. The July meeting was just a planning meeting not enough members for a quorum. Dan motioned approval and Glenn seconded.

Present: Dale Allman, Dan Harrison, Glenn Scales John Noblitt, Boyd Campbell, Helen Jones, Linda Leitch, Mike McCoy (guest), Chad Grande (guest), Gordon Radke (student), Michael Sammartino (guest), Mark Renfroe and Sam Wright.

Absent: Crisci Fleming and Sally Goebel.

### Reports:

Treasurer's Report: Linda – Submitted account list, Income/expense, P& L statement and end register report. Linda stated our Tax person would accept a letter of retainment to have them as our representative and will charge on a per use basis. To date seventeen vendors have signed up for the symposium.

Membership Report: Crisci – Deferred

Education Report: Dan – No new info for education report. Boyd presented results of round table discussion held at Catawba and stated that he gave out certificates of attendance for the session.

Rules & By-Laws Report: Helen – No report

Newsletter Report: Glenn – The next newsletter is ready to go; needs minutes of this meeting and articles. Will include the Symposium, hotel and golf registration forms. Article content can be sent to Glenn at any time.

Internet Report: All the content on the web site reflects the current available data. The Symposium event schedule will be kept updated as Glenn receives

information from Dan Harrison. The events for the three days are posted on the web site and labeled as "Preliminary". The hotel and golf registration forms are available for downloading and the Symposium registration form will be available for downloading as soon as the schedule is finalized.

Nominating Committee: Sam and asked for a list of board members leaving the board: Crisci Fleming (eligible), Dale Allman (eligible), Mark Renfroe (not running), Dan Harrison (not running), Linda Leitch (not eligible), Helen Jones (exofficio). There was concern expressed about having too many people from one company or facility on the board at one time. Additionally, there was concern expressed that support from facilities to allow their employees to attend the board meetings is dwindling, making it harder to get members.

Currently, the following individuals have expressed their desire to contribute to the NCBA as board members: David Wilson (Stanley Community College), Chad Grande, Michael McCoy (St. Francis Hospital), Susan Owen (Datex

Ohmeda), Tom Barnes (UNC Chapel Hill), and Boyd is going to call a couple of people he knows that may be interested in serving the NCBA.

### Old Business:

25<sup>th</sup> Anniversary Celebration: Dale - on schedule, contacted Elizabeth Dole's office, the Labor Secretary's office and the Governor to speak at Luncheon on Tuesday.

Relocation of Symposium: Helen – Board visited RTP Sheraton, which has more vendor space and is close to the airport. Meeting and training space is smaller. Service was less than expected. The hotel didn't not put the effort forward to get our business. The rooms were not as nice. Concern that we would not make our room nights at RTP. Pinehurst has a resort atmosphere that provides a draw and helps us meet our room nights. The Pinehurst Golf course helps bring the National representatives. John motioned and Dan seconded that we stay at Pinehurst for the next symposium. Motion approved as unanimous.

Continued Pg. 12

*NCBA News* is accepting advertising that relates to biomedical equipment and of interest to our readers. Suggested subjects are: Positions Desired, Positions Available, Biomedical Equipment Wanted or For Sale (New or Used), or Announcements of Educational Opportunities or Service Schools in the area.

Advertising is open to all individuals, hospitals, and companies. The decision to carry a particular ad or classified will be the decision of the Editor with support of the NCBA Board. Either jpeg or tiff files of the actual size ads is required. **Corporate Members please remember what free advertisement your membership allows.** Please contact the Newsletter Editor for other pricing.

### **Prepayment of all advertising is required.**

#### Classified Advertising

Except "Position Wanted" notices by members (one ad per year – limit 50 words – no charge) the following ad rates apply:

Full Page	\$200. <sup>00</sup>
Half Page	\$100. <sup>00</sup>
Quarter Page	\$50. <sup>00</sup>

If the ad is a single page to be included as an insert, the advertiser will any pay all additional printing and handling costs. Placement of non-member ads is on a "space available basis. Advertising that is to be printed in color will include all additional costs to prepare and insert the color page.

## Dollars and Sense

### By Linda Leitch, NCBA Treasurer

*Account balances as of 9/12/2003:*

Checking:		\$15,579.65
CD's:	XX205	\$24,878.54
	XX257	\$24,087.62
Scholarships:	Eddie Whisnant	\$602.32
	Norm Reeves	\$602.32
Asset Liability (tax)		\$2,125.00

#### *(Income highlights)*

Memberships	\$3,300.00
Symposium registration	\$3,458.00
Golf registration	1,350.00
Interest	\$58.43

#### *(Expense highlights)*

Office Expenses	\$1,209.20
Taxes	\$146.01



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# NEW

## MEDICAL SALES & SERVICE EXPO!

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- JCAHO: Accreditation Changes for 2004

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#### • **New Exhibit Hall "Tech Room"** featuring service tech's performing on various types of medical equipment

#### • **Awesome networking.** Golf Tournament, Lakeside Oktoberfest Celebration, and more!

For more information about the 2003 MD Expo, please call 800-906-3373  
or visit our website: [www.mdpublishing.com](http://www.mdpublishing.com)



## President's Forum continued

The organization has changed to reflect not only the refinements in our field but to reflect the wide variety of the people who have volunteered their time and talents to the NCBA over its history. Look through the list of members on the website, thumb through this newsletter and others from the past. There are many names that appear over and over. People who have agreed to serve on the board of directors are obvious stand-outs, but there are others. We have benefited this year from the special help of two individuals for their work on the 25th Anniversary symposium. They are Mike McCoy and Obie Godley. They are not on the board, yet they have attended meetings, helped plan events and researched items for the anniversary celebration of their own volition. Through the contributions of volunteers like these, this group has become a nationally recognized organization and one of which we can be proud. Congratulations on a job well and faithfully done. Together we have built a living, breathing memorial in this association that can stand as testimony of great events and people.

### A New Day Dawns, continued from Pg. 13

Bill Short, Martin King, Steve Randall, and Dave Odell. Stanly Tech is now working on an advanced standing program to facilitate the needs of BMETs who are currently working in the field but who do not have an Associate Degree.

Clint Crites is a Certified BMET employed by CHESS. He received his BMET training in 1971 while serving in the USAF. Clint joined CHESS in November 1973 and has since worked as a resident BMET at N.C. Baptist Hospital, and a shared service BMET in both the Greenville, N.C. and the Winston Salem area. He received his AAMI certification in 1974 and now is a Senior BMET with CHESS working out of the Winston Salem area. Clint has worked on several planning committees for the NCBA over the last two years, and was elected as a two year Board Member.

Bob Strickland is the Allied Health Coordinator at the Wake Area Health Education Center and was instrumental in organizing the NCBA. Presently enrolled at N.C. State University in the Adult and Community College Education Masters Degree program. Bob has distinguished himself in numerous areas of the health care field. He has received the Certificate of Registry from the Board of Registry, N.C. Society for Public Health Education and was the recipient of the Men of Achievement Award for 1980. Bob is an active member of numerous professional organizations and has been active in a variety of areas of community work. Bob was elected to a one year term on the Board.

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## Fluke Biomedical Introduces Network Test Tools for Biomedical Technicians

CARSON CITY, NV – In recent years, the area responsibilities between the IT and Biomedical Departments have become increasingly gray. Most equipment in the Biomedical Department now has the capability, via an Ethernet connection, to communicate with the hospital network. In most cases, the network is under the control of the IT department. When a problem occurs, in the uncertainty of whose responsibility it is to resolve it, the problem remains unfixed.

Fluke Biomedical has teamed up with sister company, Fluke Networks, to offer a series of front-line, network-troubleshooting tools for biomedical technicians in the United States. These tools are low-cost, simple-to-use devices that will help the technician isolate the problem to either the network or the device. Fluke Biomedical offers these four product families:

**LinkRunner** - Improves your troubleshooting and escalation accuracy by helping you to quickly determine if a problem is the network or the PC NIC.



**Inline Network Tester** - Combines cable, network, and PC configuration testing into one palm-sized tool to help quickly resolve even the toughest connectivity problem.

**OneTouch** –Provides an in-depth look into your switched network to help technician efficiently locate and resolve network problems.

**WaveRunner** - A Linux™ powered HP iPAQ™ Pocket PC that verifies 802.11b deployments while detecting the rogue access points and clients that compromise the performance and security of enterprise networks. Gives you the visibility for managing your wireless networks and lets you see what's happening in every corner of your business.

Gary Hoffman, Network Test Tools Product Manager, sees great potential for these new offerings. "Fluke Biomedical is dedicated to keeping up with the biomedical technician's current needs. Every day, they're being asked to do more with less. We're delighted that we can provide them with tools they need to simplify their job."

## NCBA Vendors – Supporting 25 Years of Excellence

This year the North Carolina Biomedical Association will celebrate its 25<sup>th</sup> Silver Anniversary Symposium in Pinehurst, NC, December 1-3 2003. Since its inception our medical manufacturers and vendors have played a major roll in the organization's success.

The very first symposium consisted of approximately 8 vendors and 40 attendees. The 2002 symposium consisted of 88 vendor booths and over 400 attendees. Wow!! How we have grown. We have our membership and our strong vendor support to thank for our success.

This years silver anniversary is sure to be a special event. Again, we will convene at the legendary Pinehurst country club, the site of the 2005 US Open Golf Championship. If you have never visited Pinehurst, especially in December and more importantly during the NCBA Symposium, you don't want to miss it.

With one of the country's largest attendances, the symposium continually proves to be a vital resource to our vendors and membership. And lets not forget the wonderful southern hospitality, great amenities, world famous golf and European spa.

Do we sound excited You bet! Yes we are excited that we are at Pinehurst. Yes we are excited that this is our 25<sup>th</sup> anniversary, but most important we are excited to have vendor backing like no other.

When milestones occur we tend to reflect on the past, remember what we have now and how lucky we are. It is with heart felt thanks that we salute all of our vendors who continually support this great organization. Please contact me anytime if I may be of assistance to you in any way.

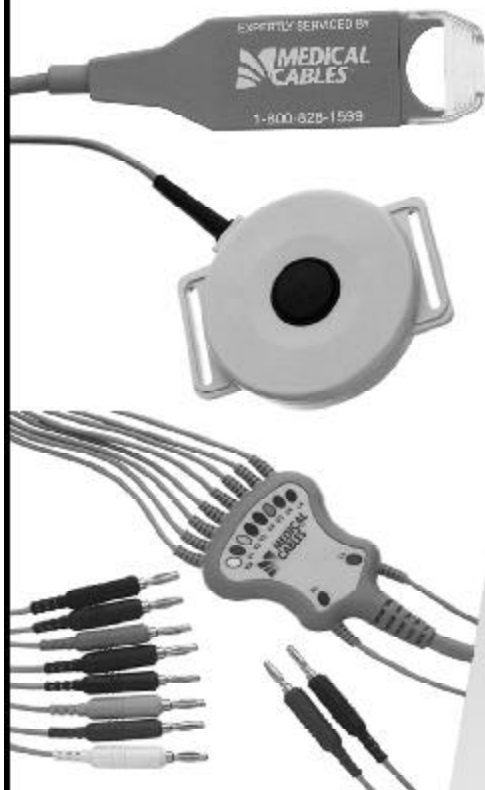
On behalf of the North Carolina Biomedical Association, thank you, and we look forward to seeing you in Pinehurst.

Mark Renfroe  
NCBA Vendor Coordinator  
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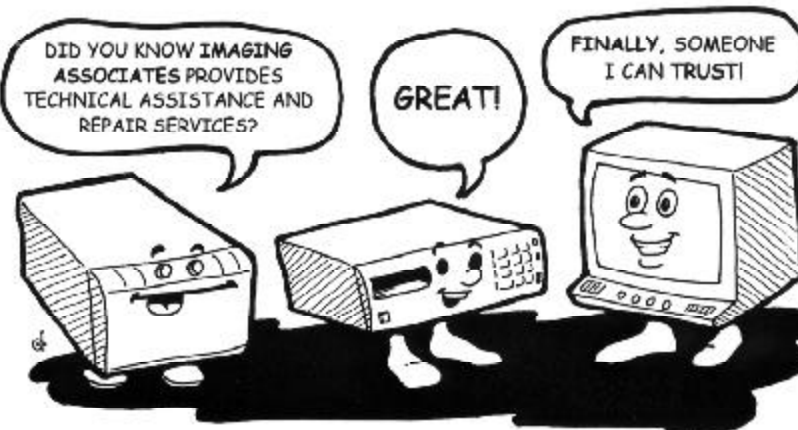
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# Registration Form: 2003 NCBA Symposium

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Facility/Company : \_\_\_\_\_ Occupation/Position \_\_\_\_\_

Work Address: \_\_\_\_\_ City, State, Zip \_\_\_\_\_

Work Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

College or University (Students): \_\_\_\_\_ Current Curriculum: \_\_\_\_\_

Mail future NCBA information to: Home \_\_\_\_\_ Work \_\_\_\_\_ Member of: ASHE \_\_\_\_\_ AAMI \_\_\_\_\_

*Refer questions to Dan Harrison at 800-825-1786, e-mail vicepres@ncbiomedassoc.com or  
Helen Jones at 336-716-3479, e-mail president@ncbiomedassoc.com*

- **Note: Late registration fee in effect after November 14, 2003 •**

<u>Advance Registration Fees</u>	<u>Late Registration Fees</u>	<u>Adv. Student Registration Fees</u>	<u>Late Student Registration Fees</u>
<input type="checkbox"/> One Day \$125	<input type="checkbox"/> One Day \$150	<input type="checkbox"/> One Day \$40	<input type="checkbox"/> One Day \$50
<input type="checkbox"/> Two Days \$200	<input type="checkbox"/> Two Days \$225	<input type="checkbox"/> Two Days \$60	<input type="checkbox"/> Two Days \$74
<input type="checkbox"/> Three Days \$250	<input type="checkbox"/> Three Days \$275	<input type="checkbox"/> Three Days \$70	<input type="checkbox"/> Three Days \$85

<u>Monday: December 1, 2003</u>	<u>Tuesday: December 2, 2003</u>	<u>Wednesday: December 3, 2003</u>
<input type="checkbox"/> Managing PACS <input type="checkbox"/> Principles of Radiology <input type="checkbox"/> Zoll M Series Defibrillators <input type="checkbox"/> Principles of Ultrasound <input type="checkbox"/> Valleylab LigaSure ESU Systems <input type="checkbox"/> Introduction to Oximetry & Capnography <input type="checkbox"/> Study Habits for CBET Certification <input type="checkbox"/> Drager Anesthesia Units	<input type="checkbox"/> Datascope Passport Monitors <input type="checkbox"/> Principles of Clinical Lab Equip <input type="checkbox"/> Hill Rom Infant Incubators <input type="checkbox"/> Power Conditioning and Line Filtration <input type="checkbox"/> Erbe Electrosurgical Units	<input type="checkbox"/> Puritan Bennett 840 Ventilators <input type="checkbox"/> Introduction to Linear Accelerators <input type="checkbox"/> Troubleshooting Diagnostic Ultrasound <input type="checkbox"/> Philips IntelliVue Monitoring <input type="checkbox"/> Radiographic Injectors



# NCBA Preliminary 2003 Symposium Schedule

## Monday, December 1, 2003

	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	Location
Registration / Cont. Breakfast																Conf. Center Foyer
NCBA Board Meeting																Convention Office
Vendor set-up Time																
Managing PACS																South
Principles of Radiology																Ross
Zoll M Series Defibrillators																Olmsted
Principles of Ultrasound																North
Valleylab LigaSure ESU Systems																Tufts
Lunch																Oakley
Introduction to Oximetry and Capnography																North
Study Habits for CBET Certification																Tufts
Drager Anesthesia Units																Olmsted
Exhibit Hall Opening Reception																Exhibit Hall

## Tuesday, December 2, 2003

	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	Location
Registration																Conf. Center Foyer
Keynote Address																Olmsted
Visit the Vendors/Cont. Breakfast)																Exhibit Hall
NCBA Lunch/Business Mtg.																Callaway / Oakley
Datascope Passport 2 Monitors																Ross
Principles of Clinical Lab Equipment																Tufts
Hill Rom Infant Incubators & Workstations																Azalea
Power Conditioning and Line Filtration																Dogwood
Computer Power Tips & Tricks																North
Erbe Electrosurgical Units																South
Vendor's Social																Exhibit Hall
NCBA Dinner																Cardinal Ballroom

## Wednesday, December 3, 2003

	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	Location
Registration																Conf. Center Foyer
Final Exhibit Removal																Exhibit Hall
Puritan Bennett 840 Ventilators																Oakley
Introduction to Linear Accelerators																Tufts
Troubleshooting Diagnostic Ultrasound																Ross
Philips IntelliVue Monitoring																North
Lunch																Callaway
Radiographic Injectors																North
Golf Tournament																Pinehurst Golf Course



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# NORTH CAROLINA BIOMEDICAL ASSOCIATION

## EUROPEAN PLAN

DECEMBER 1-3, 2003

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Pinehurst is requiring a 30-day cut off period for your room reservations. Reservations received after this date will be processed on a "space-available basis." THE PINEHURST RESORT CONSISTS OF A VARIETY OF LODGING ACCOMMODATIONS INCLUDING THE CAROLINA HOTEL, VILLAS, MANOR INN, HOLLY INN, AND CONDOMINIUMS. THE RESORT WILL MAKE EVERY EFFORT TO HONOR SPECIFIC ROOM REQUESTS. IF NOT POSSIBLE, THE BEST SUBSTITUTION WILL BE MADE. Please be aware that forms must be completed and returned by **NOVEMBER 1, 2003.**

Please Check Desired Occupancy: (Resort Accommodations)

### DAILY RATES: EUROPEAN PLAN: RESORT ACCOMMODATIONS

SINGLE OCCUPANCY: \_\_\_\_ \$146.05

DOUBLE OCCUPANCY: \_\_\_\_ \$73.63 PER PERSON

**SERVICE CHARGE & STATE SALES TAX:** Rates are **INCLUSIVE** of a 10% service charge, 7% state sales tax, and 3% occupancy tax on room portion only.

Rates are per person, per night, and include **lodging only daily**, badminton, volleyball, biking, fitness programs, use of hotel fitness center, use of Lake Pinehurst Marina and hotel pool (based on seasonal availability), regularly scheduled historical walking tours, and tea service in the hotel lobby. **AT ADDITIONAL CHARGE:** Golf, tennis, croquet, lawn bowls, carriage rides, fishing and boating (season availability), and Spa services.

**HOTEL PARLOR - \$90.00++ PER NIGHT**

**ROOM PREFERENCE (based on availability):** \_\_\_\_ **NON-SMOKING** \_\_\_\_ **SMOKING**

**ARRIVAL DATE:** \_\_\_\_\_ **DEPARTURE DATE:** \_\_\_\_\_

**Check-In Time 4:00 PM - Check-Out Time 12:00 NOON**

**DEPOSIT & CANCELLATION POLICY:** A deposit representing one night's rate per person is charged at the time the reservation is made. Pinehurst must receive notice of any cancellation at least 30 days prior to date of arrival in order to refund a deposit. The reservation deadline is **November 1, 2003.**

Please fill out and fax or mail with deposit to:

Convention Reservations

FAX: 910-235-8503

\*Pinehurst cannot accept individual telephone reservations\*

Pinehurst Resort

Phone: 910-295-6811

P.O. Box 4000

Pinehurst, NC 28374-4000

**ROOM(S) TO BE OCCUPIED BY:** (Please print or type)

(All guests will be charged a one-night room deposit)

**Name:** \_\_\_\_\_ **Address:** \_\_\_\_\_

**CREDIT CARD NAME & NUMBER** \_\_\_\_\_

**Expiration Date & Cardholder Name**

**Telephone Number: (Home)** \_\_\_\_\_ **(Business)** \_\_\_\_\_

\*\*\*\*ASSOCIATE CLUB MEMBERS\*\*\*\*

WE LIKE TO RECOGNIZE ALL OF OUR ASSOCIATE CLUB MEMBERS.

**PLEASE FILL OUT THE FOLLOWING INFORMATION:**

**CLUB WITH WHICH YOU ARE AFFILIATED:** \_\_\_\_\_

**YOUR MEMBER NUMBER:** \_\_\_\_\_

**NOTE: This is a Hotel reservation form — DO NOT send this to the NCBA**

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## **BOD Minutes Continued from page 3**

Mark brought up doing a plaque for vendors that have sponsored NCBA. Dan brought up doing special plaques for those individuals who dedicated years and a lot of effort to NCBA. Group discussed reading out the by laws on honorary members and then reading the list of honorary members. Dan is going to form a list of people to be an honorary member during the November meeting for a vote. Mark is given approval to put a plaque together for the vendors that have been friends of the NCBA.

12:15 pm Lunch Break

### **New Business:**

Hotel: Helen – Keep dinner at the hotel due to cost of transportation and time of travel to alternate location. Vendor area will have a reception both nights.

Approval of Budget: Linda went over budget and made a couple of corrections. Dale motioned and Dan seconded approval of the budget.

Linda stated the tax representative has not heard anything further from the IRS after they submitted the corrected

forms. Tax agency suggested certain changes in our processes which the board has done.

Education: Dan – Great response from Vendors, Dan has biographies and course outlines from presenters. On track with outline for symposium. Big thanks to the work Linda did last year, which has made this year run smoother. The Board agreed to cover Marv Sheppard with a room, travel as well as provided meals.

Membership: Glenn – Three membership renewals reced. Glenn is going to assume Membership Secretary duties until further notice.

Newsletter: Glenn – No new business. There is one additional newsletter planned for mid-November.

MD Expo – Nothing for NCBA to gain.

Golf: Dale – We have the #5 course and pricing will be \$90.00 per person or a group 4 for \$340. \$100 for hole sponsorship; \$500 for special hole sponsorship. Golf prizes will be given at the golf tournament this year.

Linda motioned and John seconded to adjourn meeting at 2:30. Motion approved as unanimous.



# "A New Day Dawns"

## Reprinted from NCBA News, Vol. 1, No. 1

The evening of November 5, 1980 was a historic time for the N.C.B.A. On that evening after months of hard work and planning, the N.C.B.A. elected its first Board of Directors. A board of five 2-year and five 1-year members were elected. Out of these 10 members came the association's 4 principle officers, President, Vice President, Secretary, and Treasurer.

The Board of Directors for the year of 1980-81 will consist of 10 outstanding individuals in the Biomedical industry. Following is a short personal insight of each individual to help familiarize yourself with your new Board of Directors.

Elected as the first President of the N.C. B.A. is Patrick K. Lynch. Pat is a CBET, Associate Clinical Engineer for CHESS and employed as Director of Clinical Engineering for Charlotte Memorial Hospital in Charlotte. Pat holds an A.A.S. in Electronic Technology from Central Piedmont Community College and is presently enrolled in the Bachelor of Engineering Technology program at UNC-Charlotte. He has worked in the Biomedical Electronics for 5 years. Pat will be a one year member and serve one year as an ex-officio member to the Board of Directors.

W. Glenn Scales of Biomedical Equipment Rental and Sales, Inc. in Raleigh was elected Vice President. Glenn is a CBET and was, until recently, employed as Manager of the Biomedical Engineering Department for the Wake Medical System. He received his training in the Air Force and was employed by them for six years. The last two years in the Air Force were spent as an instructor in the Biomedical Equipment Technology Course. Glenn began his civilian employment with CHESS and in 1974 established the Biomedical Engineering Department for Wake County. He continued as Department Manager at Wake after leaving CHESS in June 1975. He will serve a two year term as Director.

Wes Cornack will be handling the duties of Secretary for the Association. Wes is the Manager of the Biomedical Engineering Department at Moore Memorial in Pinehurst. He received his education from Oklahoma State University in Stillwater, Oklahoma.

Wes has been in the Biomedical Industry for 3 years, 2 1/2 years at Moore and six months at Rex Hospital in Raleigh. Wes will serve a 2-year term as a Director. In addition to

the duties of Secretary, Wes will also serve as Chairman for the Membership Committee.

The office of Treasurer is being filled by Eddy G. Whisnant of Raleigh. He is employed as a BMET for Physio-Control in Raleigh. Eddy holds an A.A.S. in Electronic Engineering Technology from Thomas Nelson Community College in Hampton, Virginia. He has also continued his education at Central Piedmont Community College, Charlotte, and UNC-Charlotte. Eddy has been in the Biomedical field for 2 1/2 years, 1 year with CHESS and has been employed at Presbyterian for 1 1/2 years. In addition to the duties as NCBA Treasurer, Eddy will also chair the Finance Committee for the Association. Eddy will serve 2 years as a Director.

Jim Downing of Wilson was elected to a one year term as Director. Jim is Director of Biomedical Engineering at Wilson Memorial Hospital in Wilson. He holds an A.A.S. in Electronic Engineering Technology from Wilson Technical Institute and has completed 2 years in Business Administration at Atlantic Christian College, Wilson, in addition to military training. Jim has been in the industry for 5 years at Wilson Memorial Hospital.

Frank Forrest, Manager of the Biomedical Engineering Department at Memorial Hospital of Alamance, was elected to a 2-year term as Director. Frank has been in the Biomedical Industry for 5 years. The first 2 1/2 years was with Bay General Community Hospital in Chula Vista, California. In June 1975, Frank came to Burlington and started the Biomedical Engineering Department at Memorial Hospital of Alamance. Frank has 24 years experience in electronics with the U.S. Navy and is presently working on his A.A.S. in electronics at Technical College of Alamance.

Dave Curry of Grace Hospital in Morganton, was elected to a 1-year term as Director. Dave is Chief BMET at Grace and has 9 years experience in the Biomedical Industry. He has eight years training in military electronics, plus several courses in medical electronics.

Dr. J.C. Boone, Dean for Occupational Education at Stanly Technical College in Albemarle, was elected as a one year Director. Dr. Boone's interest in Bio-medical Engineering began in 1977 when the College undertook a study to determine the need for BMET education in North Carolina. In consultation with leaders in the field, Stanly Tech developed and implemented the first BMET Associate Degree Program in North Carolina. To assure the quality of the program, Stanly Tech contracted CHESS to teach all medical instrumentation courses beginning July 1, 1980. Instructors from CHESS have included Bob Cowan,

**Continued on Pg. 5**

# Windows Graphics Formats

## By Glenn Scales, CBET

In an earlier NCBA News, I introduced the subject of graphics in Windows. That article dealt mainly with how graphics are organized and how WinXP uses graphics. But there are a number of different graphics formats and each is suited to different tasks. This article will introduce you to the different formats used in the Windows environments.

Graphics can be divided into two different classes: bitmaps and vectors. Bitmap (or raster) graphics are stored as a series of tiny dots called pixels. Each pixel is assigned a color, and when they are viewed all together, they form the picture. Bitmap graphics can be edited by erasing or changing the color of individual pixels. There are many different bitmap file formats: TIFF for printing; Adobe Photoshop's PSD and BMP; and finally GIF, JPG, and PNG for the Web.

Vector graphics are not based on pixel patterns, but instead use mathematical formulas consisting of lines and curves that make shapes. Vector graphics are ideal for illustrations, line art, and type. Because web pages cannot display vector graphics, vectors have to be converted to bitmap (rasterized) before being displayed on the Web. Some file formats include: Encapsulated Postscript (EPS); Adobe Illustrators' AI and WMF; and PICT for the Mac.

Tagged-Image File Format (TIFF) is used to exchange files between applications and computer platforms. TIFF is a flexible bitmap image format supported by virtually all paint, image-editing, and page-layout applications. Also, virtually all desktop scanners can produce TIFF images. TIFF graphics are not compressed and are quite large in comparison to a format such as JPEG. JPEG compresses file size by selectively discarding data. Because it discards data, JPEG compression is referred to as lossy. A higher quality setting results in less data being discarded, but the JPEG compression method can degrade sharp detail in an image, particularly in images containing type or vector art.

As an example, I received a TIFF file from one of our vendors for an ad in the NCBA News. The original TIFF file was 10.6 Meg in size, but when the file was opened in Photoshop and saved as a JPEG format, the file size was 410 K. When the two file formats are printed and compared side-by-side, the difference is hardly distinguishable. JPEG has several options available when saving files that affect their viewing and printing quality and how you use these options depends on what program you are using and what your needs are.

The two primary file formats for Web graphics are GIF and JPEG, although support for PNG is growing. Both GIF and JPEG formats use different methods of compression and have respective strengths and weaknesses.

GIF (Graphic Interchange Format) is the most common Web graphic file format. GIF compression is 8-bit and has a maximum of 256 colors. As a general rule, GIFs are better suited for graphics with areas of solid or flat color such as illustrations and logos.

Other advantages to the GIF format is that it lets you create transparencies, interlacing, and animations. Most of the graphics you see on the NCBA web page are GIFs. Graphics with subtle color shading are usually JPEGs. In most cases the NCBA web site is limited to these two formats. When I have tried to use PNG the results have been unpredictable and not entirely reliable.

A transparent GIF allows one color to be set as transparent, usually a background color. All Web graphics are square or rectangular and transparencies are a way to create the illusion of irregularly shaped images. Interlaced images display a rough version of the entire image quickly and then gradually fill in the details. Animated GIFs are files that contain multiple images set to display like a slide show. They work on all major browsers and require no plug-ins.

The JPEG format (Joint Photographic Experts Group) was especially designed for images of photographic quality. JPEG compression is 24-bit, which means files can contain up to 16.7 million colors. As a result, JPEGs are ideal for photographs, drawings, and any image with complex or subtle color gradations. Unlike GIFs, the standard JPEG file is not interlaced, a problem addressed by the Progressive JPEG.

PNG (Portable Network Graphic) is largely considered the format of the future. However, many older browsers (I.E. 4 and Netscape 4 or older) do not support the format at all, and some newer versions still have sporadic problems. Despite some well-founded skepticism, the future still looks somewhat bright for the license free PNG format.

Now that you have some of the basics of graphics formats, you will eventually need to work with your graphics files. This may involve simple tasks like resizing or cropping or more elaborate processes like color correction or applying special effects. There are any number of graphics manipulation programs - some are free and others like Adobe Photoshop are quite expensive.

If you are lucky enough to have a copy of Photoshop (list price around \$600) then you have a tool that will allow you to perform virtually any task associated with manipulating a graphic image. However, money doesn't grow on trees and Photoshop is out of the price range for most BMETs. An excellent alternative is LView Pro 2002 from MMedia Research. This \$37 shareware program gives you many very useful tools for editing graphics without the huge expense of high-end programs like Photoshop.

Adobe recently released a scaled-down variation of Photoshop specifically for the home user that is interested in editing the digital photos that are becoming more and more commonplace. Photoshop Elements is a \$99 program that gives you all the tools you might ever need for editing and retouching digital photos.

Finally, if you need to keep all these files organized, the very best program I've found is ACDSee from ACD Systems. This extraordinarily versatile program gives you everything you will need to organize and view your digital image collection. A free trial of this program and others can be downloaded at <http://www.acdsystems.com>.

# NCBA "Classic" Golf Tournament

## Returns to Pinehurst to play Course # 5

The course provides an interesting variety of holes. Long and short par-4's, uphill and downhill approach shots, makes course # 5 a solid golf course and a delight to play.

So, line up your team or come as a single for another great round of pleasurable golf.

Wednesday, December 3, 2003 Pinehurst Country Club  
Pinehurst, NC

10:00 am Shotgun Start (Weather permitting)

Cost: \$90.00 per person, or

\$340 for a group of four, or

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Registration Deadline: November 1, 2003



**NO REFUNDS AFTER**  
**NOVEMBER 1, 2003**

**Contact: Dale Allman at Premier. Phone 800-999-6678, mailbox # 7156**  
**Cell Phone 704-490-2674 or Home Phone 704-528-7526**  
**E-Mail [director4@ncbiomedassoc.com](mailto:director4@ncbiomedassoc.com)**

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**Open to all NCBA Symposium Attendees**  
**(Vendors and Members)**

**Vendors interested in sponsoring holes should contact Dale Allman.**

**Make Checks payable to: NCBA**

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**Name:** \_\_\_\_\_

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**Phone:** \_\_\_\_\_

## SCHEDULE of NCBA BOARD of DIRECTORS MEETINGS for 2003

**March 14, 2003, Time: 10:00 a.m.**

Siemens Uptime Service Center, Cary, NC  
Host – Sally Goebel, Ph: 336-586-0868

**May 16, 2003, Time: 10:00 a.m.**

Sheraton Hotel, Research Triangle Park, NC  
Host – Glenn Scales, Ph: 919-681-6638

**July 11, 2003, Time: 10:00 a.m.**

Wayne Memorial Hospital, Goldsboro, NC  
Host – Mark Renfroe, Ph: 919-731-6077

**September 12, 2003, Time: 10:00 a.m.**

ARAMARK Clinical Technology Svs., Charlotte, NC  
Host – Dale Allman, Ph: 800-825-1786

**November 14, 2003, Time: 10:00 a.m.**

Pinehurst Resort & Hotel, Pinehurst, NC  
Ph: 800-487-4653, [www.pinehurst.com](http://www.pinehurst.com)

**December 1-3, 2003**

2002 NCBA Symposium and Expo  
Pinehurst Resort & Hotel, Pinehurst, NC

**January 9, 2004, Time: 10:00 a.m.**

Duke University Hospital, Durham, NC  
Host – Glenn Scales, Ph: 919-681-6638

**February 6-7, 2004, Time 8:30 a.m.**

Board of Directors Planning Retreat  
Myrtle Beach, SC - Location to be determined

**Board Meetings are open to the NCBA Membership.**

**Please plan to attend.**

*North Carolina Biomedical Association*

*6300-138 Creedmoor Road, PMB 272*

*Raleigh, NC 27612-6730*

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