

**INSIDE:****Nuclear-Fusion  
Device****Cell Phones -  
Again****Networked  
Medical  
Devices.**

*Charles Verzi  
ETBA President*

**President's Corner**

*Charles Verzi*

We are trying something new here at the ETBA. We have moved our second meeting of the year to May. Traditionally in June we have a drop of 50% in the attendance. I can only attribute that to the summer vacation season. We are also going to try to move our December meeting.

I have been cruising the BMET association sites and have found no issue that seems to have cropped up in our industry lately. But I have been in discussion with several ETBA members and it seems like we are communicating more frequently with our IT departments. This could be because of the overlapping of our job responsibilities and duties. So, through some personal experiences, I would like to share some pitfalls and advantages to working with this technology that seems to be "blending."

Several years ago we implemented a new fetal monitoring system. This system went from the traditional alert system to an integrated charting platform. We did not fight the IT department but made it clear that our job duties ended where the fetal monitor transferred its information to the network. The support of the network to the displays would now be their responsibility. It has been a good test of how interdisciplinary teams work well or not so well.

First, the department appointed a nurse to support the system. This was a great move. She understood the charting needs and the mission critical aspect of real time patient data. This person has worked well with not only troubleshooting the clinical issues but has learned the technical aspects of supporting this type of system.

*(Continued on page 3)*

**Website...**

Randy Bueckman

Our domain (etbiomed.org) has been hosted from its inception on Esper Systems computers. Esper is, or should I say was, a local internet service provider in Knoxville.

Recently XxPansion Networks purchased Esper. From time to time we have been XxPeriencing some difficulties. As they are transferring our web content to the

newer servers, several of our CGI scripts and Server Side Includes that make up our web pages have ceased to function. Each time I either find a problem or I am notified by someone, I call or email XxPansion and they have it fixed in short order.

If you experience a problem with our website, please let me know by email at [rbueckman@yahoo.com](mailto:rbueckman@yahoo.com)

Thank you for your patience!

## Networked Medical Devices

Randy Bueckman

Issues have arisen lately with PC based medical devices connected directly to hospital networks. It seems that these devices have been infected with viruses. There has been some conversation on the biomedical list server about what to do. The more common response is to contact the manufacturer to get their recommendations.

This brings up many issues regarding patient safety as well as responsibility for keeping anti-virus software up to date. Simply purchasing off-the-shelf anti-virus software and installing it could interfere with the normal operation of the medical device. Doing nothing, opens the door for the theft of patient data, as well as interruption or reprogramming

of the medical device.

While this is becoming an issue, many hospitals have purposely kept medical data networks and information networks separate. For now this may be a good option but at some point, efficiencies will only be realized when the two networks can find a way to live peacefully together.

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## Cell Phones

Randy Bueckman

I know, you thought the cell phone issues were being solved. Patient equipment was no longer affected or at least the range of impact certainly has been decreased. Well you are right! We recently relaxed our policy at Children's to allow cell phone usage in patient rooms. They are still banned in critical areas but as long as you stay three (3) feet from any medical device, you are allowed to carry and use your phone just about everywhere else.

Medical equipment interference is not the new hot cell phone issue - patient privacy is. Okay, it is not just an issue with cell phones, PDAs are also on the banned list. Some hospitals have begun banning both devices because of their camera features. You can imagine the privacy issues surrounding the ability to take a picture of a patient or a patient record and instantly transmit it anywhere in the world.

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## Nuclear Fusion Gadget

Randy Bueckman

I don't know how many of you saw the short article in USA Today several weeks ago. I thought it was worth mention here. Apparently a new miniature nuclear-fusion reactor has been developed.

At the heart of the device is a pyro-electric crystal and deuterium gas. The crystal electrically charges when heated and the gas is propelled into a target which releases helium and neutrons. The neutrons can be used to see through objects.

Some of the devices that could be developed using this technology include a hand-held X-

ray device or an implantable X-ray treatment device. There is also talk of using this technology as a means of space propulsion.

Components for this device are relatively inexpensive. They also do not lend themselves to being used as parts for a dirty bomb.

While this technology is just being developed and explored, it has a lot of potential. Perhaps one day portable X-ray machines will be the size of cell phones! Of course then they will have to be banned from the hospital environment!

## President's Corner

*(Continued from page 1)*

Now for the pitfalls... The IT department controls the technology and they haven't been doing a good job keeping the system running at peak levels. Support has been spotty because of the reliance on the clinical support specialist. Software issues have been batted around. Upgrades in the hardware have lapsed. Standing back and looking at this situation has also made me evaluate the way our biomedical service is delivered in this rapidly changing technical world.

With software and PC based technology we have to rethink the norm. As biomedical technicians, we are very used to the idea (as most of us are expected) of supporting systems 15 years or longer. To the IT staff, 15 year old equipment is unheard of. I venture to say that none of your IT departments support DOS based systems (or for that matter Win 3.11 or Win 95 or Win 98)... you get the idea. Most IT equipment and software has a life of 5 years max. But what biomedical professional has the ability to replace 90% of their technology every five years?

We support an 8-bed sleep lab that runs on its own network. It has been expanded several times with several different levels of processors running on PC's. The oldest unit is 5 years the newest 3. Guess what? We are in need of an upgrade. It is not that the computers cannot handle the job that they are doing - it is the issue of support. Windows NT was designed as the savior of the corporate software world. No more security issues, blue screens of death, and, it was designed to usher in a new era which it has. The new era of Windows 2000 and Windows XP. All this within a five year span. The current hardware will barely support the requirements of XP. In addition, we want to do digital video and central server storage of records.

We also support an EKG system that is running on Win 3.11. Yes that is right, dust off the old manuals and pull out the floppies. This system has been out of support for 3 years. We keep rebooting it when we have communication errors and crossing our fingers when the power goes out. We have a replacement in place, but they want a little more out of this system before we can administer the last rights. This unit sits in an EKG lab and is maintained by the dedicated biomed and EKG staffs. The replacement system is software on a hard drive in IT somewhere. We will maintain the new EKG carts, but once the information is dumped, our ownership ends - much like the fetal monitoring system.

What I have learned over the last 5 years are the following points:

- The hardware might be up to the task for the application, but not the operating system.
- You might have the best OS today but not tomorrow.
- The OS and the hardware are really dependent on each other.
- When dealing with computer technology you must think in 5 year cycles, not 15.
- You must define support issues up front with **all** parties involved.
- Someone must take ownership of upgrades not only with software but with the hardware.

One last comment about dealing with computers in medicine. Many of the traditional vendors that we have used in the past are learning these same lessons as we learn them. They are moving more and more from hardware only vendors to a "blending" of the technology. Make sure that you communicate precisely the needs and wants of your organization.

Hope to see everyone at the May 24<sup>th</sup> meeting here in Johnson City. Have a safe trip up!

# The next ETBA Membership Meeting will be on Tuesday May 24, 2005. Hosted by:

**Johnson City Medical Center**  
400 N. State of Franklin Road  
Johnson City, TN 37604-6094  
Phone: (423) 431-6111

The meeting will be in the 7<sup>th</sup> floor auditorium.

The presentation will be given by **Innerwireless** regarding their technology!

\* From the North: From I-26 East, take Exit 36 (State of Franklin Road, TN 381). Exit right onto State of Franklin Road. Proceed approximately 3 miles (crossing Market Street, US 11E). Johnson City Medical Center will be on your left.

\* From the South: From I-26 West, take Exit 31 (University Parkway, Elizabethton; US 321). At the stop light, turn left onto US 321 South. This will be University Parkway. Proceed to State of Franklin Road at the 5th stop light (following US 321) and turn left. After approximately 1 mile, Johnson City Medical Center will be on your right.

\* From the East: From US 321 South, proceed into Johnson City. This will become University Parkway just past I-26 overpass. Follow University Parkway past East Tennessee State University; turn left onto State of Franklin Road. After approximately 1 mile, Johnson City Medical Center will be on your right.

\* From the West: US 321 North and US 11E North will become Market Street in Johnson City. Move to the right hand lane and turn right at State of Franklin Road (TN 381 and US 321 North). Johnson City Medical Center will be on your left.



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## **Inside this Issue...**

Nuclear-Fusion

Medical Device Networking

Cell Phones - Again

Membership Meeting Tuesday May 24, 2005