

ceasa

THE CLINICAL ENGINEERING ASSOCIATION
OF SOUTH AFRICA



WIN

a trip to

DUBAI!

CEASA

National

News

The Voice of Clinical Engineering

President's Letter



National CEASA President
Phill Willmot

I would like to take this opportunity to thank all Council and Committee Members nationally for the effort in keeping our house in order. Also a big thanks to our webmaster, Rob Dickinson, for keeping us up to date with all applications and web info. Then last but not least, the new administrator, Christo Strydom for holding the national admin function together. These are all challenging tasks and most or done at the drop of a hat for no reimbursement, just the pleasure of making a difference.

Some small changes in the first quarter of 2012, Rodger van der Bank resigned as Treasurer in Gauteng and is ably replaced by Rai Landau. Thanks to Rodger for the effort and support in the past and to Rai for stepping up to finish out the term. Then on a National level, Gerald Koning stepped down after years of brilliant service due to work constraints, and a BIG thanks to Gerald for the dedicated years of service. Gerald is replaced by Paolo Boschetti from Gauteng Branch, thanks Paolo as well for jumping in.

2011 was swept away in a flash and we are already done with a quarter of 2012. Wow. The Western Cape Branch are assisting in getting Eastern Cape up and running, and once they are on their feet, we will relook other areas. This is all a numbers game so with enough interest, each region can get their own interest groups going. This is ultimately the plan, to get member quorums running countrywide. They also have a couple of functions planned for this year in their area.

2012 is also off to a good start with the Gauteng Branch under leadership of Lizanne Heyns, and with the 2012 incentive plan on the table for CEASA - WOW - way to go! The prize: a trip to Arab Health in January 2013. Sadly I am excluded. Basic rules that apply are attending all the Gauteng Meetings and being a paid up Gauteng member and in good standing. Full rules available from Lizanne. Please remember that this year is election year again for the Gauteng Committee, so please start looking at possible candidates that are willing to participate and support the cause. It is important that we all as members, elect people we feel can add value and build CEASA for you the member.

The registration process for ECSA is also getting underway now and a few more people have joined the list of registered members. Remember, being a paid up member of CEASA, you qualify for a big discount from ECSA. It will soon be required by DoH to be registered with ECSA, and this will go through the MEM sub-committee, already formed by peers and CEASA members, so please don't wait and start the timeous process now, it is really tedious and time consuming, but it will soon be a pre-requisite to getting employed in medical technical posts. Should you need any guidance to guide you or support to get started, we have our very own AA facility. Please ask me directly and I will willingly assist you in

pointing you to someone to support if not myself. This is really important and time is going to count against you when the hammer falls as the ECSA registration process takes a while. Please start NOW.

Anyhow, I hope to see most of you sometime soon at one or all of our functions, as these are amazing networking places to meet new and old lost friends in our amazing industry.

Please take care and have a great and successful 2012.

Phill

In This Edition:

Page 1	Presidents Letter
Page 2	The Tablet revolution
Page 3	Technology
Page 4	Local Technology
Page 5	Upcoming Events
Page 6	Back Page



iPad showing the way for Imaging

Tablet computers such as the iPad are becoming more and more popular, but new research from the University of Sydney means they could soon be used in hospitals as a tool for doctors to view medical imaging.

Medical images such as x-rays and scans could soon be viewed on tablet computers like the iPad in our hospitals. Results of the University of Sydney study, presented this month at the Medical Imaging conference in San Diego, show tablet computers such as the iPad are as good as standard LCD computer screens when used as secondary

display devices for viewing medical imaging. Secondary display devices can be used by doctors who move from patient to patient in hospital wards.

The lead researcher of the study, from the at the University of Sydney, says, "In the past, doctors would do their rounds in the wards, returning to a desktop computer to view images. Now they can do it at the bedside with an iPad or other tablet computer". Dr McEntee assessed the diagnostic efficacy of iPads when compared with LCD secondary display monitors for identifying lung nodules on chest x-rays, intracranial bleeds and fractures. Eight examining radiologists of the were involved in the assessment, reading chest images on both the iPad and an off-the-shelf LCD monitor. Thirty chest images were shown to each observer, of which 15 had one or more lung nodules.

The results demonstrate no significant differences in performance between the iPad and the LCD. The iPad screen - like other desktop screens - has a resolution of 130 dpi (dots per inch). "This is great news for patients and staff alike. Instead of a patient having images referred to, they can see the images at the same time the doctor is talking to them and this will make the experience for the patient much more open."

However, Dr McEntee's study foresees possible complications with widespread use of iPads in hospital wards in the event of theft. Dr McEntee cites a risk to the security of patient records if they are stored on the tablet computer using applications such as , the first Food and Drug Administration-approved medical app. In response to this risk, he advises never storing patient data on the tablet, rather, images should be viewed using access codes to browse patient data using web browsers.

There are also guidelines to be followed that ensure best practice when reading x-rays on an iPad or tablet. These include the guarding against poor viewing conditions, viewing images on the move, and dirty, greasy screens.

Dr McEntee emphasizes that while the iPad can be used for secondary diagnosis only, with primary diagnosis of medical images, such X-rays, CT, MRI and PET scans, to be carried out on specifically designed high-quality primary LCD's in accordance with regulations issued by the and the. Such primary display devices have a dpi of between 508 and 750dpi and are defined as Class I.

"When no primary display device exists, diagnoses can be carried out on a secondary display device, such as an iPad, but this is only in the most urgent of cases, for example to determine whether a patient is suffering from an intra-cranial bleed," Dr McEntee says.



Technology

Information technology

Hard drive (HD) manufacturer Seagate has become the first company to reach the storage density of 1Tb/inch². This was achieved with a technology called heat-assisted magnetic recording (HAMR) that heats up each magnetic bit during manufacturing allowing denser packing on a drive. Theoretically, HAMR allows up to 10Tb/inch² that could lead to a 60TB HD for desktops in the next 10 years. The maximum capacity of a current desktop HD is 3TB and the first generation of HAMR HDs will likely at least double these capacities.

Medical technologies



Doctors-in-training at the University of Chicago using iPad tablets found that using the device helped them be more efficient at ordering tests and procedures for their patients. A study that tracked 115 residents who received devices to

access patient records and coordinate their care, found that they cut about an hour per day off their workload. The iPads allowed residents to see patients' electronic health records, contact the hospital laboratory or other departments, show patients their own x-rays and other test results, as well as access medical journals. A few months into using the iPads a survey found that 78% said they were more efficient on the wards with the devices, and 68% said they avoided delays in patient care by using them.

Dräger

There is a growing need in hospitals today for accurate diagnostic procedures that are non-invasive and provide continuous measurements. The Infinity Acute Care System monitoring solution supports the new Masimo rainbow SET technology - which non-invasively measures blood components that previously required invasive procedures and also continuously measures fluid volume status.

The Infinity® MCable® Masimo rainbow® SET monitors functional oxygen saturation of arterial hemoglobin pulse rate and perfusion index. Additional options provide measurements that help to assess bleeding, anemia, fluid status, carbon monoxide poisoning, and reactions to certain medications.

Simply connect the MCable to the Infinity M540 patient monitor and see blood measurement data in real time on the Infinity M540 and also at the Dräger Medical Cockpit® when the monitor is docked at the bedside. All measurements are performed non-invasively and continuously - both at the bedside and on transport in the hospital.



Medical Technology

Program allows instant assessment of heart murmurs

Stellenbosch-based Diacoustic Medical Devices has developed SensiCardiac, an auscultation-based computer-aided software program aimed to help doctors instantly establish whether a child's heart murmur is pathological or physiological, without having to refer the patient to a paediatric cardiologist.

How it works

SensiCardiac is a Computer-Aided Auscultation (CAA) program that combines a stethoscope with support software to give a visual representation on a computer screen of what the physician is hearing during heart auscultation.



The software is used in combination with an electronic Stethoscope such as the ThinkLabs d32+ digital stethoscope that helps to capture the patient's heart sounds and analyses it on the computer. Using it on the latest Windows tablet will allow you to easily assess a heart murmur at the patient's bedside.

SensiCardiac assists to identify and classify basic heart sounds and murmurs and gives a full summary of the findings in a format that is user-friendly and easy to read and interpret.

It allows a doctor to analyze the patient's heart rate with an accuracy of more than 90%. This is especially useful for paediatric patients with heart rates of above 120bpm.

"More importantly, it allows doctors to diagnose and treat problems before they become life-threatening," says Dr Gerhard Schoonbee, a Caledon GP who has invested in a Sensi system.

Origins

Sensi was developed by Diacoustic Medical Devices with the assistance of Stellenbosch University's medical and engineering faculties.

The initial research was performed under the guidance of Professor PL van der Merwe of the paediatric cardiology department and Dr Mike Blanckenberg, biomedical electronics researcher and senior lecturer in electrical and electronic engineering. On 1 July 2011, Sensi received FDA approval.

Cost

SensiCardiac can be bought as a full package or the various components can be bought separately.

Cost of package: R4 450 (electronic stethoscope and software)

Software only: R2 490

Upcoming Events



SAFHE/CEASA

CALL FOR PAPERS BIENNIAL CONFERENCE 12 - 14 March 2013

Proposals for papers should comprise a cover page and an abstract of the paper. Presentation time will be 35 minutes of which 5 minutes will be allocated to questions.

The Cover page should contain:

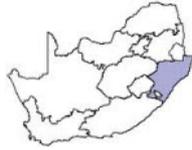
Deadline Dates:

Title of the paper	
Proposed topic	Submission of Proposed Papers 31 Aug 2012
Full name and title (Mr., Ms., Dr., Prof.)	
Name of your employer / company	Notification of Selected Papers 30 Sep 2012
Job title	
A brief CV of 50 - 100 words	Submission of Presentation 15 Feb 2013

The abstract should contain:

A brief description of the main points of the proposed presentation of 200 - 300 words. Indication for which track it is proposed (A, B or C). Full contact details i.e. postal address; telephone; fax; e-mail; cell phone and alternative contact name. Please email your proposed abstract and CV to: natalie@sbs.co.za

IN YOUR REGION - WATCH THIS SPACE

<p>Gauteng</p> 	<p>KZN</p> 	<p>Western Cape</p> 
---	---	--

Back Page

Letter from ECSA

Good day all,

I am going to do something different this year. In the past we have asked for a list of all persons in good standing at the Voluntary Associations (VAs). Persons not in good standing were then removed from ECSA's discount listing. This has caused a lot of unhappiness with the registered persons and a lot of work for everybody. Every year we have been receiving thousands of queries from persons that did not receive their ECSA discount - a saving of R950 per year on your ECSA membership. It is not a pleasure and you in the VAs are also familiar with many people requesting you to give ECSA confirmation that they are actually in good standing.

The way forward:

I will not take off names from ECSA's database of VA members unless the VA has informed ECSA that the person's name has been removed from their register as a result of non-payment of fees, request or any other reason.

Regards,

Gerard Schekkerman

Manager Finance

Engineering Council of South Africa

COMPETITION !



Win a trip to DUBAI!

Gauteng Competition 2012

Win a trip to Dubai and visit Arab Health in 2013 (flights, accommodation, visa and daily allowance incl)

How to Enter:

You are automatically entered every time you sign the attendance register at meetings throughout the year.

Rules:

Anyone is Eligible to enter, but you must:

- Be a paid-up Member to Dec 2012
- Have attended all CEASA Gauteng meetings in 2012
- Have a valid passport

