

Report on the 2014 SMBE (NSW) Country Biomedical Engineering Conference

The 2014 SMBE (NSW) country Biomedical Engineering Conference was held in a beautiful beachside of Wollongong, on the South coast of NSW from 24th to 26th March.

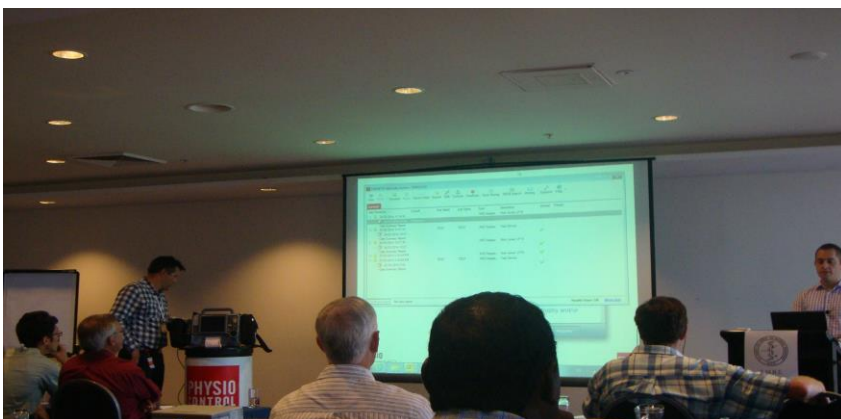
Welcome BBQ on Sunday night was organized at Win Entertainment Centre, following day Conference was officially opened with Welcome speech by Bruce Morrison. Bruce detailed about conference being organized every year since 1987 and this year the programme is designed to have something for everyone, expecting all delegates, visitors, sponsors and trade exhibitors to find something in the programme to suit them.

There were many highlights in the conference; I am going to include few out of them. There were 32 trade exhibitors Covidien, Olympus, Welch Allyn, Masimo, Dräger, Fluke Biomedical are some of the names to mention.



One of the innovative test equipment displayed was Flow Trax from Pronk Technologies

This is palm size infusion pump Analyzer which is use to identify volume performance, integrated occlusion testing and flow rate within a 1 % tolerance in 3 minutes or less. This device is also the multi- function Infusion Pump Analyzer which enables to perform various functions such as infusion pump tester , pressure meter (-12.5 to 75PSI),temperature meter(28.9 to +115.5 degree Celsius) and Digital Timer/Stopwatch. This is also capable of electronic storage and downloads as well as software upgrade, USB port and very portable and can operate with AA battery and AC power. This device is rugged, portable and easy to carry with so I found this one very convenient for Bio-meds working in NT and in other areas where there is lot of travel involved for service trip and where of weight of testing equipment significant role plays.



Presentation on SCRS (State Cardiac Reperfusion Strategy) by Physio - Control & ACI was interesting and good to know technology used for Heart patients by NSW health clinicians. SCRS is a system of care for patients with suspected Acute Coronary Syndrome (ACS) .NSW Health clinicians including physicians,

nurses and paramedics working collaboratively to deliver patient centered care that is tailored to specific settings. Paramedics acquire and transmit 12 lead ECGs to the ECG reading service for diagnosis confirmation .If a ST elevation Myocardial Infarction is confirmed, the choice of reperfusion model is directed by ambulance protocol. With the use of this feature treatment times are reduced as system activation occurs before the patient arrives at the hospital. Lifepak 15 Defibrillator is used in ambulance by paramedics to send and receive ECG signals; other models of Lifepak 20, 20 e can be used for this purpose with added communication feature on these models.

Wi-Fi networks in hospitals presented by Robin Arian explains about challenges in the way we connect our devices into the hospital IT network .As more and more medical devices are connected to hospital networks the risks and challenges are increasing. Problems involving device interfaces, upgrades and security measures are only some of the issues that can impact safety and hospital operations.

Historically, healthcare facilities have placed medical devices such as physiologic monitoring systems on their own vendor - supplied networks. While some vendor supplied networks may still be appropriate in certain situation, healthcare facilities are more frequently placing medical devices on the hospital network .This means that an ever increasing amount of medical data can be delivered to electronic medical records and exchanged between different information systems that reside on the hospital network.

As medical devices are added to the hospital network, numerous issues do arise such as a medical device manufacturer can predict the performance of its stand-alone network but this becomes impractical once devices are placed on a hospital's IT network, Consequently the healthcare facility must share responsibility with the medical device supplier for ensuring effective and reliable operation of the medical system.

Case study presented by Jae-Won Choi tried to exemplify challenges Bio-med face when single network infrastructure for medical and IT is implemented .In this scenario fault finding is no longer between vendor and BME as IT personnel has to be involved too and if IT network goes down then Medical Network is down as well, thereby increasing potential source of errors massively. Medical IT could be an future opportunity for Bio-meds and the need for stronger IT background clinical engineers in hospital is in need and hospitals should validate their networks for intended use and verify that manufactures have tested and determined acceptable latency and load characteristics for each product the hospital uses or anticipates to use on the network.

I had a great opportunity to participate in the conference , I always believe that participating in conference provides an opportunity to get updated on the latest technology of medical , networking among like-minded people and learn from people experience who have devoted years and years in this profession within Australia and overseas. I am very grateful to SMBE SA/NT for selecting me for this award and my sincere thanks to Dräger for sponsorship without your support I wouldn't have got this great opportunity. Mike Gibney and I from Medical Equipment Management attended the seminar representing Northern Territory which was great privilege and it was great moment for us to share our experience working in NT with people from other hospitals and industry.

Pramod Lamichhane, SMBE/ Dräger Encouragement Award 2014