



# The Society for Medical & Biological Engineering S.A. Inc

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## From NEWSLETTER March 2001

### Part 2 - Working at Johns Hopkins Hospital in the USA

Tony Carlisle - February 2001

I remember the first day I was involved with upgrading all the monitoring equipment in one of the ICU's at Hopkins. It was a Monday and I was up very early that morning in my city apartment, well before the sun was up.

After a quick breakfast I made my way along two blocks to the Metro Subway. I was wearing my leather jacket, trench coat, ski gloves and woolly cap. Steam billowed up and out through cracks in the roads as it did every morning. Most of the homeless were also up at that time as they were every morning. The metro subway trains came by every 8 minutes on their way to Johns Hopkins Hospital. The ride cost \$1.35 and only took about 5 minutes from where I got on

I arrived at the hospital with just enough time to start working by 6am.



The ultimate in convenience is having your own subway station.

Plenty of my colleagues were also arriving at about the same time. I had just one thing on my mind that morning. To get stuck into tearing out all the old monitors in S-ICU (Surgical ICU). We each loaded our "carts" in the BME workshop with tools and sundry items. So it was up 7 floors to S-ICU and the first item in my cross-hairs up was the old central station. Everything had to go, even the shelves and cabling. Nothing was given any mercy. The corridor in S-ICU was the drop zone for the old equipment. It wasn't even cold before it was gathered up and taken away. Right on my heels were the hospital carpenters. They had new cabinets and shelves ready to install. They wasted no time in starting. The new networking cables had previously been pulled and terminated on wall-plates throughout the unit. Next job was to remove the old bedside monitors. There were two empty beds, so we did those first. We practiced on these two units before moving on to do the isolation rooms. One of the BME guys had rounded up several transport monitors so we could keep monitoring the patients while taking the old monitors out. A Nurse was also present in each room, keeping a watchful eye on the proceedings. These isolation rooms took much longer to do for a couple of reasons. Firstly, we had to gown up and get someone to hand in everything in sequence. Secondly, all the cleaners mysteriously disappeared. They were going to clean every item and tool coming out of these rooms. Anyway, we ended up doing this work too. After this, we split up and individually took care of the rest of the beds. As we finished a bed, one of the three Marquette clinical educators on site came in and started one-on-one training for each of the Nurses on duty. We finally stopped for lunch. I was starving and at last had time to go to the loo. Cathy from Marquette ordered 20 large pizzas on her expense account. You beauty! At US\$20 each, that was a big order by my standard. They were quickly divided up amongst us guys and the Nursing and Medical staff in S-ICU. There was plenty for all and no waste.

After lunch, we mostly tidied up and a couple of guys including a couple of Marquette technical guys stayed on to get the central station installed and configured.

The technical work was all over by the end of the day, however the clinical educators came back that night to follow through with training the night shift. I did not get up to anything much that night, I was exhausted. Two days later and the same thing happened all

over again, only this time it was in the S-ICU step-down ward. Overall, it was an interesting and rewarding experience. A schedule was then drafted to look at tackling Cardiac-SICU, Neuro-ICU, NeoNatal-ICU, Paed-ICU as well as each of their step down units. ED was to be a bit later and the Oncology-ICU had been done before I started in October. For interest, the ICU's were around 16 to 24 beds each.

Most weekends I hired a car to check out some of the surrounding attractions. Driving on the right hand side of the road took some getting use to as well as lots of concentration to avoid steering head-on into traffic after turning a corner. Baltimore City was mostly composed of one-way streets. This required constant vigilance to know which streets you can and cannot turn into.

One weekend I drove up to Gettysburg in Pennsylvania, in the next state. It happened to be their "Memorial" day weekend. Hundreds of people dressed up in Civil War period costume and proudly paraded and marched down the main street.



The beginning of the parade with hundreds more following.



Another weekend I visited Washington DC. It took about 45 minutes to drive there and there are two highways to choose from that run directly between Baltimore and Washington. Washington is huge and the road layout is designed to confuse all motorists. The US Capital and "Mall" area is also huge with dozens of attractions including the Holocaust Museum, the White House, the Smithsonian Institutes, the Capital building, Art museums and more. In fact, more than I could go to if I spent a week there.

The North East Coast gets very cold in Winter and January is certainly wintertime.

It snowed from Washington to New York on Christmas Eve. Just before New Year's Eve, New York City had half a metre of snow. To stop the roads from icing up, most of the streets are covered with salt sprayed from council trucks driving up and down.

The max temp on the day of this photo was  $-1^{\circ}\text{C}$ .

I also took a 2-hour train ride to New York for a weekend. It was good not having to drive as I got to see all sorts of things along the way. The train stopped at Pennsylvania Station long enough for me to get off where I then caught a cab to get me to my hotel.

I balked at the standard AUS\$500-700 per room per night rate and had booked an economy room weeks in advance at the bargain basement price of only AUS\$250 per night. The cab driver went straight past my hotel making a BeeLine for the North Pole. I told tell him where to go, so he took me there. Guess what, the hotel room was the size of a dog box. Still, it was only for one night.

I went up the Empire State Building and there was hi-rise everywhere. I wondered how Manhattan Island didn't sink into the depths from all the weight. I found out that 3 million workers commute to Manhattan Island every workday because it was too expensive to live in New York City. Added to the resident population of New York City of over 8 million, means that there is a lot of people on one little island (also going by my standard).





I also managed to catch the ferry over to Liberty Island and there was still plenty of snow on the ground to play with. On the Saturday night, I went to the musical “Aida” playing on Broadway in Time Square. It was fantastic. Even just walking around Broadway and Time Square was great. There was so much to see and do and I felt quite safe walking around the place. It did not take long for Sunday night to come around and I caught the train back to Baltimore.

I woke up on Monday morning with what felt like a bit of a hangover. I couldn’t figure out why, as I hadn’t guzzled alcohol that weekend. I guess it was due to all the stimulation (such as the bright lights and electronic billboards at night) that had constantly pounded my senses for around 36hrs.

Toward the end of my 3 months there, I managed to have a look around the Johns Hopkins University. There were shuttle busses leaving every 15 min for the 10 mile each way trip between the two institutions. Professor Nitish Thakor showed me around some of the Uni. He held up his hand and said, “these four buildings here, are just for Biomedical Engineering”.

We went inside the first building one and he took me to one of the Clinical Engineering classrooms. There were about 20 students, each working on a 12 week project of their choice and it had to be ready for presentation within a couple of weeks. He got each student to tell me what they were doing from scratch, so I got a good idea of what they were up to and he got to assess their progress.

They have 500 BME under graduates and a little over 100 postgraduates studying BME. Roughly 1/3 of their BME undergraduates progress into Medicine, about 1/4 carry on to do post graduate study in BME and end up working in a hospital research lab, and a proportion of the rest end up in industry somewhere.



Here you can see two of the BME buildings at Hopkins University

My 3-month tour of duty quickly came around and it was almost time for me to pack up and come back to Oz. I felt sad about leaving lots of my newly acquainted friends and I tried my best to tie up my loose ends at work, but life in the Clinical Engineering Department at Hopkins was flat out for 8 hrs a day. However, I felt good about how much I had helped them out for the 3 months I was there. I had learnt a lot from working and being there and I also managed to show them a few things too. Overall, it was a great learning experience for all.

I certainly wasn’t going to miss the daily sub freezing weather. In fact the day I got back I was going to kiss the ground of safe and cute little old Adelaide, but the temp was 41°C and I would have burnt my lips.

**E.&O.E.**