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THE HEALTH ENGINEER



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N.Z. INSTITUTE OF HEALTH ESTATE AND
ENGINEERING MANAGEMENT

THE HEALTH ENGINEER

The Journal of the NZ Institute
Of
Health Estate and Engineering Management

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Inner back cover – Original frontage – what has been saved.

Cover Photo - Wellington Hospital frontage as it was three years ago before demolition and commencing the new hospital. See inner back cover to see what has been saved.

The health and viability of any organization depends on good communications. Our objective is to produce a good quality health engineering magazine. The magazine should inform readers, it should provide a forum for discussion, encourage interest in all aspects of the technical side of health facility management in its widest sense.

Greetings members and friends,

Well our Annual Conference is not far away now. If you have not registered and booked your hotel then you should do it now.

Go to the web site HYPERLINK www.nziheem.org.nz for all the information and the latest conference program.

Remember that this is our only opportunity to gather as colleagues to share our experiences and continue our professional development in this fascinating area of hospital engineering. If you are having problems justifying the trip please ring me and I will try to help.

Capital & Coast DHB campuses at Newtown and at Kenepuru continue to see development and change. The new Blood and Oncology building that will be "zipped" into the yet to be built main hospital building has now been open for a few weeks. The Short Stay Unit associated with the Wellington Emergency Department opened recently. The departments and wards that occupied the Oncology Building have all been decanted into other places and the final buildings on the New Regional Hospital Site are now ready for demolition. Demolition of the huge bunkers that housed the Linear Accelerators will be a spectacular task. Guy Fawkes is coming so the public may not notice the bangs!

At Kenepuru Hospital the new Outpatients, Accident and Medical and Therapies wings are now open for business with a very grand main entrance.

Standards NZ have announced an On-Line Standards service. This looks attractive as we find the administrative effort to keep a set of hard copy Standards for our DHB and hospital and the Medical School Library a significant task. It is the sort of service that should be purchased centrally for all DHBs.

Oxygen Leaks. It is amazing how easily oxygen leaks from wall fittings add up. After puzzling over our consumption graphs we have finally got a budget system to show how expensive the leaks are. We now do comprehensive leak surveys every 12 months. The payback is less than a year every time. The leaks have been so pervasive that we are now thinking of putting electricity meters on the Medical Air Compressors and to do leak surveys on the Medical Air outlets too.

BOC is a regular supporter of our conference and Institute. The prize is a trip to an Australian conference. Details are on the Web Site.

I have been given responsibility to manage the Voice and Data telecommunication contracts. It is fascinating to see the very expensive trends away from land line minutes to mobile phone minutes. We can only assume that the labour efficiency gains outweigh the increased costs. The big issue is the cost of Land-to-Cellular Network. The Cellular Networks deliver our calls almost equally between Vodafone and Telecom NZ. "Termination charges per minute" to both the networks is very high. The Commerce Commissioner is investigating these charges. The Commissioner thinks the price should be 15c/minute. This is less than half what we pay. The value of such a reduction is \$150,000 pa for Capital & Coast DHB. We are watching carefully. Neither Vodafone nor TelecomNZ want to be regulated needless to say.

VOIP or Voice-over-IP is flavour of the year. I have learned that most data circuits are very under utilized, and circuits carrying PACS files are even more under utilized. There seems to be great opportunities for some rationalization of Voice and Data circuits but the question of resilience and redundancy often qualifies those opportunities.

If you have a Cell Phone do you also carry a Pager? If so why? Why not a pager phone which is a cell phone with all features including TXT and incoming voice functioning but which cannot make outgoing voice calls. A very neat solution. It can also confirm TXT delivery and TXT opened.

The capability of TXT as an Appointment Reminder to patients is also being trialed. Cellular technology is very neat and added value solutions are starting to be actually delivered.

We have nearly got Weather Equations for Heating and for Cooling of all our buildings. ("Energy = Slope x Degree Days + Intercept"). This is proving very diagnostic as it means that at the beginning of every month we know if we have beaten the weather and improved the Energy Efficiency of the building. It has also illustrated that some buildings

have unexpectedly large "Intercepts" that is, the energy that is not weather related. We have already used the information to rush around and do a lot of additional insulation on Heating Water system components. Putting a dollar figure on the losses is so easy, and seeing the response is also very transparent.

At least 13 DHBs have electricity contracts that expose them to the Spot Market. Auckland DHB has a full fledged co-generation plant but others are starting to consider setting up their standby plant for parallel running if the Spot Price rises above the Breakeven Price for diesel generation. This has two benefits. It caps the spot price exposure and it means that the generator gets a good workout when it is most economic to do it. That is when the spot price is high.

Asset Management Plans for this year were due in October. It will be interesting to see which DHBs have got their AMPS the most fully developed. I will be interested to see how members have developed their Building Condition Reports and other Asset Condition Reports that will feed into AMPS in due course. At C&CDHB we have only one reasonably developed Building Condition Report. We have 100 Buildings to go! We are planning a talk by MedSafe on Medical Device Categories and ECRI coding that will help with the AMPS for Medical Devices.

We are finding compliance costs are rising. The Territorial Authorities in our region have sent us a letter which appears to advise that there will be a charge of \$100 for every complete Building Warrant of Fitness filed. We have 100 buildings so we see a substantial new cost for something that was free.

The aging work force issue has confronted us recently. We have had a couple of retirements. These men have been doing an excellent job for years and years and have been doing it without much support from computers and technology. They were skilled tradesmen. However now they are not here we have realized that the plant condition monitoring they did instinctively during plant room rounds is no longer happening.

We are investigating more objective measurement based condition monitoring. Particularly of extract fans and air handling plant and of their filters and bearings and belts. Less frequent visits to plant rooms but more objective measurements of condition should reduce costs without compromising reliability. We shall see!

Medical devices that transmit and receive radio signals have been of interest.

"AS/NZS 3200.1.2:2005 Medical electrical equipment Part1.2: General requirements for safety – Collateral standard: Electromagnetic compatibility – Requirements and tests" are quite explicit on the safe distances between transmitting devices of particular power. New devices installed in our Short Stay Unit have brought the situation to a head to try to work out how to deal with it. Cell Phones in areas with sensitive equipment like Syringe Pumps particularly are an unresolved issue. We usually solve this by installing "No Cell Phone" signs which are universally ignored.

I had an interesting cold calling salesman recently. He had been to China and seen a self-contained self-propelled duct cleaner. It appeared to be able to climb the walls of a square duct and crawl along the underside of the roof all the while cutting muck off the surface with an "Air Knife" and vacuum cleaning back into a closed bag for hands free disposal. Neat!. How dirty are your ducts? Especially the extract ducts?

Those of you using the BEIMS Maintenance Management system should be updating to version 5.5 now. We have finally, after waiting on our ICT team for many months, got the BEIMS Contractor Web feature working. This will allow our contractors to manage their own Work Orders on our system from their offices. We expect a huge reduction in paper and data entry and an improvement in data quality too. "Every Work Order associated with an Asset" is the objective.

Andrew Paterson

President

Internet Survey.

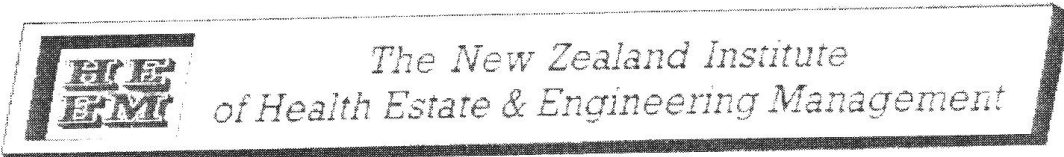
According to Statistics NZ there are now approximately 1.24 million subscribers to the Internet in New Zealand.

Residential (household) subscribers account for 80% of the total and 63% of the revenue.

Business / Government subscribers account for 20% of the total and 37% of the revenue.

There are 30 subscribers per 100 inhabitants in New Zealand compared with 29 per 100 in Australia.

Dial-up is the most common form of connection with 800,000 (65%) of subscribers and 440,000 (35%) high speed subscribers with DSL the most favoured connection technology.



www.nziheem.org.nz

MEMBERSHIP LIST
 MEMBER NAME
 MEMBER TYPE
 MEMBER ADDRESS
 MEMBER CITY
 MEMBER STATE
 MEMBER POSTAL CODE
 MEMBER PHONE
 MEMBER FAX
 MEMBER EMAIL
 MEMBER COMMENTS



**Conference
 For Better for Worse
 in
 Sickness and in Health**
*"Sixty years together, what will the future bring?
 Developments in technology, technique and treatment"*
10th & 11th November 2005



**Venue:-
 Duxton Hotel
 Wakefield Street Wellington**



Of Interest To Those in the Health Sector including:

- Facilities Managers
- Maintenance Managers
- Maintenance Contractors
- Services Engineers
- Biomedical Engineers
- Engineering Consultants
- Property Managers

The Conference:

This year's Conference theme is: *"Sixty years together, what will the future bring? Developments in technology, technique and treatment"*
 There have been many changes to the way health care, technology and engineering is delivered. The aim of the conference is to share some of these changes with our colleagues and stimulate our thinking on current and future best practice facilities engineering and management.
 In conjunction with the conference Philips Medical are holding a workshop for **Biomedical Technicians** on Wednesday 9th. Topics to be covered include: Defibrillators and Electrocardiographs
Biomedical Seminar Info: Tony Blackler Phone 03 364 0218 (bus) Fax 03 364 0436 (bus)

Our Technical Visits will look at Facilities - Waste Water Plant at Moa Point: Biomedical - NIWA

Partners Programme

A program has been arranged for Partners, giving an opportunity to shop, sightsee and generally view our city and its surroundings in a relaxed manner.

Trade Night

A feature of the Conference is the Trade Display on Thursday evening giving delegates the opportunity to view products and services of interest to the Health Industry. Food and refreshments will be served during the evening.

We sincerely wish that delegates from out of town would spend the weekend in Wellington to enjoy the sights and sounds of our vibrant capital city.

Contact Details

Please return registration forms by 14th October to:-
NZIHEEM Conference 2005, C/o Andrew Paterson, Manager Technical Services, Capital Coast Health
PO Box 7902 Wellington South. Phone 04 385 5493 or 027 4468 610 Email – andrew.paterson@ccdhb.org.nz

The **Duxton Hotel** is ideally located in central Wellington with excellent Conference facilities.

The Duxton Hotel is offering delegates a room rate of \$190 per night.

For Hotel reservations, please contact:

Phone: 04 473 3900 Fax : 04 473 3929 Email: office@wellington.duxton.co.nz www.duxton.com.au/well_location.htm

Rooms have also been reserved at the nearby **Accor Hotel Ibis** at a room rate of \$133 per night

For Hotel reservations, please contact:

Phone: 04 496 1880 Fax : 04 496 1881 Email: H3049-RE01@accor-hotels.com
www.wellingtonnz.com/Accommodation/Ibis

Conference Program – Final Draft

Thursday 10th November

- 0800 – 0900 Registration
- 0900 – 0910 Official Opening – Andrew Paterson President of NZIHEEM.
- 0910 – 0940 Keynote Speaker – Bob Henare Chairman of CCDHB –Engineers can be leaders in governance.
- 0940 – 1020 Major Sponsor IBM – David Heald – New Technology for a new era “IP networking”.
- 1020 – 1040 *Morning Tea* Sponsored by Aquaheat Industries Limited
- 1040 – 1120 ANZEX Delegate Jim Cozens NE Wangaratta
- 1120 – 1200 John Penny Vectek UPS Power Supplies
- 1230 – 1330 *Lunch*
- 1330 – 1530 Site Visits
- 1600 – 1700 Annual General Meeting

1800 – 2100 Trades Night – Displays of products and innovations in the Duxton Ballroom

Friday 11th November - Speakers

- | | | |
|--------------------|--|--|
| | Facilities Group | Biomed Group |
| 0900 – 0945 | Spirax Sarco. Clean Steam | Major Sponsor GE Medical – New Developments in diagnostic medical equipment |
| 0945 – 1030 | Members Paper Tony McKee
Report on Fusiotherm trip | Major Sponsor Cardinal Health – New Technical Developments in interventional medical equipment |
| 1030 – 1100 | <i>Morning Tea Sponsored by mbar</i> | |
| 1100 – 1145 | Major Sponsor EFI
Developments in the
NZ energy market | Matthew Jones/Tim Staker,
Members Paper Biomedical
Benchmarking |
| 1145 – 1230 | Members Question Time | David Nicholson – Medsafe
Update on the Joint Agency |
| 1230 – 1330 | <i>Lunch</i> | |
| 1330 – 1415 | Hospital Emergency Management
Greg Philips and Katrina Brill | Brian Robinson – Human Patient
Simulator |
| 1415 – 1500 | Paul Vickers - mbar | 3M – Brian Kirk, Bowie Dick
Technology for Sterilizer Monitoring |
| 1500 – 1515 | <i>Afternoon Tea</i> | |
| 1515 – 1600 | New Zealand ANZEX Delegates paper - Paul McCartney | |
| 1600 - 1645 | Clinical Speaker – Angela Brounts – Advances in diagnostic laboratory techniques | |
| 1830 - 2300 | Cocktail Hour and Annual Dinner, BOC Engineer of the Year Award | |

Jim Cozens is the 2005 Australian ANZEX delegate who will attend the NZIHEEM Conference in Wellington and then tour the North Island visiting various hospitals. He will be travelling with his wife Beverly

Some info on Jim:-

Jim is the Manager - Facilities Management and Planning
Northeast Health Wangaratta (Editor's note – Wangaratta is approximately 300km north east of Melbourne in northern Victoria, about 90km southwest of Albury)
He will be presenting a paper at the NZ National Conference.

The topic will be Hospital Engineering in Developing Countries. "The paper will be based on my experiences in several countries in Central and South East Asia and the Middle East."

His hospital interests are energy management, maintenance management systems and the role of government in the regulation and administration of health services in New Zealand.

Itinerary –

- 8th Nov - Arrive Wellington - Staying at Duxton Hotel until 13th Nov
- 9th Nov - NZIHEEM Exec Meeting
- 10th-11th - NZIHEEM Conference
- 12th - Site Seeing in Wellington
- 13th - Travel to Hastings
- 14th - am Visit Hastings Hospital, - pm travel to Rotorua, overnight
- 15th - Visit Rotorua Hospital , travel on to Tauranga
- Staying Overnight with Colin and Sharon Gauld
- 16th - Visit Tauranga Hospital, pm travel to Hamilton
- Staying overnight with Kevin and Annette Bardsley
- 17th - Visit Waikato Hospital, pm travel to Auckland
- Staying with Bill and Linda MacDougall
- 18th - Visit Auckland Hospitals
- 19th - Depart Auckland



The portion of the original frontage of the hospital which has been saved and is sighted at the back of the new development beside the walkway down to the new cancer centre. There was considerable debate when the old hospital was being demolished as to how much of the frontage should be preserved. Some wanted the whole frontage on Riddiford Street preserved and the new hospital built in behind it. Others didn't care if any was preserved. It remains to be seen how this will stand out when the new hospital is built.

Continued from previous page....

Joint Boards

The joint Standards Development Board (JSDB) and the Joint Standards Management Group (JSMG) exist to facilitate the working relationship with Standards Australia and Standards New Zealand to ensure Joint Standards developments are managed appropriately.

These two mechanisms allow good communication at both stakeholder and management level. The recent review of stakeholder consultation structure may alter the mechanism but the intention to maintain good, productive communication will continue.

Joint Standards Development Board

- Oversees the strategic direction of the development of joint Standards.
- Provides strategic advice to the SA Standards Development Board and the NZ Standards Council on the development and revision of Joint Standards.

- Mediates on any issues brought by stakeholders in either Australia or New Zealand, or by SA or SNZ, or by the Joint Standards Management Group as to the development and revision of Joint Standards.

Joint Standards Management Group

- Consists of the senior technical staff of both Standards Australia and Standards New Zealand.
- Deals with project proposals.
- Determines whether resources are available to undertake new projects.
- Considers country-specific requirements.