THE AUSTRALIAN

NO 42 July 2007

METROLOGIST

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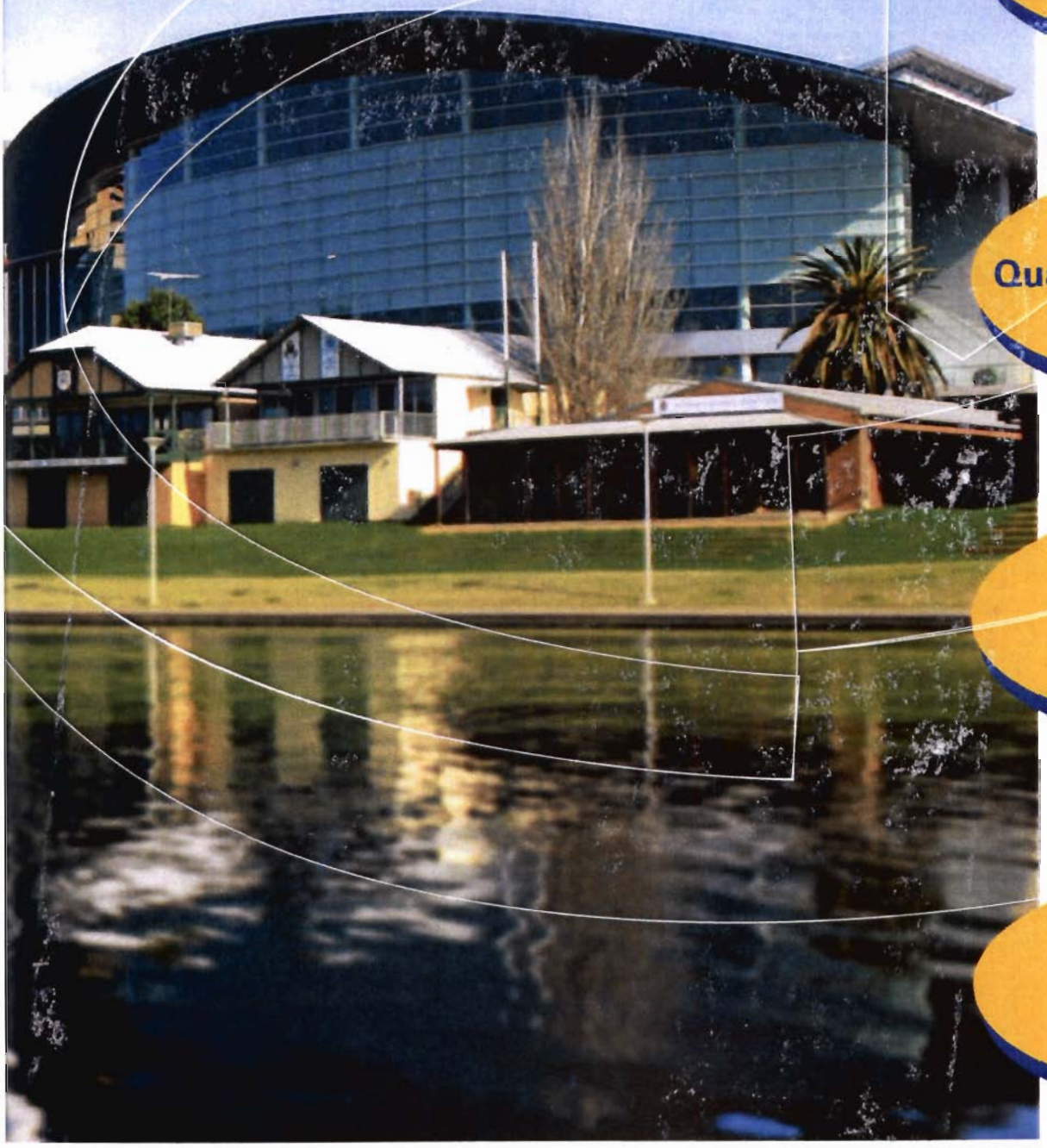

AGM Notice and Forms

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THE AUSTRALIAN METROLOGIST

From the Editor

As noted last issue, this TAM has the required notice of AGM together with nomination and proxy forms, which you may photocopy as necessary. (Please don't slice up your TAM!)

Thankfully Jeff and Ron continue to help me out - or it would have been a very thin journal this time...

You will find some pictures from a Victorian group meeting new the end of the journal. No identification was given, but I think I recognise some of the attentive attendees.

Next time I will be able to notify you of the new national committee structure, together with possibly some news and pictures from the conference in Adelaide.

- Maurie Hooper

Cover photo - a view of downtown Adelaide - courtesy Ross Felix

The Australian Metrologist

The Australian Metrologist is published four times per year by the Metrology Society of Australia Inc., an Association representing the interests of metrologists of all disciplines throughout Australia. Membership is available to all appropriately qualified and experienced individuals. Associate membership is also available.

Contributions

Articles, news, papers and letters, either via e-mail, disk or hard copy, should be sent to:

The Editor
The Australian Metrologist
11 Richland Road
NEWTON SA 5074
Phone: (08) 8365 2451
E-mail: maurie@maurie.org

The deadline for the next issue is 28th July 2007.

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Write or e-mail the Editor with your details including years of experience and qualifications. This service is offered free of charge.

Need a Metrologist?

If you have a position vacant, write or e-mail the Editor with the details. A charge of $20 for up to 10 lines applies. (The circulation may be small but it is well targeted.)

The deadline for positions wanted/vacant is as above.

Letters to the Editor

Letters should normally be limited to about 300 words. Writers will be contacted if significant editorial changes are considered necessary.

Editorial Policy

The Editor welcomes all material relevant to the practice of Metrology. Non-original material submitted must identify the source and contact details of the author and publisher. The editor reserves the right to refuse material that may compromise the Metrology Society of Australia. Contributors may be contacted regarding verification of material.

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Editor: Maurie Hooper

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Contact either your State Coordinator or the Secretary, Neville Owen, e-mail address *thesecretary@metrology.asn.au* or write to:

The Secretary, Metrology Society of Australia
c/o National Measurement Institute
PO Box 264
LINDFIELD NSW 2070

The MSA website address is www.metrology.asn.au

Webmaster: Mark Thomas (03) 9244 4042 (W)

MSA Membership Fees

Fellow	$45 Annual Subscription
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President's Report - July 2007

Thank you.

This is my last President's Report; it seems odd after six years to know that I won't have poor Maurie pestering me for my few words every few months! But I have to say it has been one of the more enjoyable aspects of the role, so you never know your luck Maurie, I might even write some freebies for you.

As I said this is end of six years of Presidency, 11 years in all as a member of the national committee, two children including the first MSA baby (nearly named *Hecta* by the Society at one conference dinner) and development of a large number of wonderful friends in a diverse range of disciplines. That is at the heart of this society - a group of committed people with a common passion but with a huge range of perspectives. This diversity is also the strength of the society.

Back in 1993 at a meeting in Clayton about a hundred metrologists from all over the place came together to see if they thought there was a need for such a group. A society dedicated to issues surrounding Metrology. As a society we owe a great deal to those people, particularly Ron Cook, who first saw the need. They recognized that as quality systems grew there was a danger that short-sighted organizations and industries would be fooled into thinking that they didn't need laboratories or measurement specialists.

Initially the meeting was focused on traditional fields of electrical and dimensional metrology but quickly it became clear that the issues these metrologists faced were the same as those faced by measurement scientists in chemistry, biology, medicine and any number of other fields.

Not all the dreams that have been dreamt over the 14 years of the society's existence have been fulfilled. In parts of the country the privatization of public utilities has lead to the closure of many of the larger laboratories and fragmentation of the industry into smaller one and two-man businesses. But if you are working on your own, how much more important is it to exchange ideas with others in your field. Rather than undermining the purpose and role of the society these changes have made the work of the society all the more important.

I remember one of my very early reports where I talked about the MSA being entering its teenage years and concern that we needed to remain focused as a group if the society was to survive or preferably flourish. Well I think we have survived and even more we have flourished. We have a truly national organization that regularly meets with representatives from every state. We regularly hold conferences that are attracting international interest and are forming a great platform for the exchange of ideas and knowledge. Above all we have active and growing groups in every state. It is not easy but it is happening .

The society has had and will continue to have a significant role to play in Australian metrology industry and infrastructure. As an independent voice of the profession of metrology we have and I hope will continue to help government and industry to work through the myriad of issues they face. Not all will be won, but a number of significant battles have already been fought and the years ahead will need our full commitment if Australia is to benefit from the economic boom it is experiencing.

It has truly been a pleasure to lead this society into its adulthood and I ask that you each support the new president in the role of guiding and growing the society, as I also plan to.

Thank-you to each an every member of the society for their support during my term as President. I will thank two organizations in particular for their ongoing and active support of the society, NMI and NATA. It is certain that without their upfront and kind support, the MSA's journey thus far would have been much rougher.

Above all thank you also to everyone I have served with, there are a pleasingly large number of you and for fear of missing even one individual, I will resist the urge to name everyone. Please accept my gratitude for your efforts and my friendship, it has been a great journey.

- Jane Warne

Contents

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Quantification - Number 12

Jeffrey Tapping

How long was a mile originally?

The word *mile* derives from the Latin, Mille Passus, which means 1000 paces. These paces were double steps (that is, left forward then right forward), counted by the Roman legions as they marched along. Obviously this could not be an exact measure, but it is accepted that it was about 1618 (Imperial) yards, or 1479 metres. So the Imperial mile is about 9% bigger than the Roman one, but as we have seen so often in this series, the idea was taken up by others but the actual value varied greatly from place to place. Some examples of the mile or its local equivalent were:

Scotland	1,810 m
Ireland	2,048 m
Portugal	2,283 m
Sweden	7,500 m
Denmark	10,000 m

What is a dopping of sheldrake?

We now move into the troubled topic of gender politics. This term is the collective for a group of shelducks (bright-coloured and variegated ducks), on or under water. So why the collective uses the term for the male of the genus, and why not flying ducks you can work out for yourself, but it seems like a clear case of discrimination to me.

This also raises the interesting topic of collectives in general. Why do we have a herd of cows, a flock of sheep and a litter of kittens? You also know about a flotilla of boats, a fleet of buses, a shoal of fish and a pod of whales, but there are actually more collectives than you could have dreamed about. Here is a selection from the hundred or more that I have record of.

sloth of bears	rag of colts
murder of crows	dule of doves
gang of elk	fesnying of ferrets
skulk of foxes	smuck of jellyfish
leap of leopards	ostentation of peacocks
nide of pheasants	purse of spiders
wedge of swans	murmuration of starlings
knob of toads	rout of wolves

What are the following instruments used for?

Drosometer, ebulliometer, fluviometer, cryometer (a prize is offered for the most imaginative answers).

In the absence of any imaginative answers my own are respectively: A device for counting fruit flies (Drosophila species), a mood meter (for detecting ebullience), a chimney gauge (for measuring soot build-up in flues), and a system for assessing the effectiveness of TV soap operas. Now for the actual answers.

A *drosometer* is used by meteorologists to measure dew precipitation, and the name comes from the Greek word drosos for dew.

An *ebulliometer* displays the boiling point of a liquid, and is used for measuring the amount by which a dissolved substance changes a boiling point.

Next time you are driving down the road in a rural area and you see one of those planks of wood placed vertically at the roadside with river flood depths marked on it, you can say knowingly to your companions, "There's a *fluviometer!*", thereby confirming your reputation as a smarty-pants (or some similar epithet).

And lastly, a *cryometer* is actually a cryogenic thermometer. The low temperature connotation comes from the Greek kryos for frost, but the English word cry comes to us (and much distorted along the way), from a Latin word for crying.

What is the similarity and difference between a barie and a barye?

The similarity is that they are both units of air pressure. The name *barye* is an obsolete term for a *bar* (10^5 pascals which is approximately one atmosphere), and a *barie* is a microbar, so the difference is a factor of a million. To add to the confusion the name *barad* has also been used for a microbar, so you would need your hearing aid

turned up to avoid making an error when discussing pressures using these units.

What is the similarity and difference between a ching and a ch'ing?

Perhaps in Chinese these two words sound quite different, because the answer is very much like that for the last question. They are both units of area used in China, but 1 *ch'ing* is equal to 600 *ching*. In case you are wondering, a *ching* is about 11.2 square metres.

What is the origin of the term Jumbo for a large object?

It came to prominence because it was the name of a large African elephant in the Barnum-Bailey circus. This Jumbo stood about 3.3 metres high, and ended his life on display in the London zoo towards the end of the nineteenth century, so he became very well known. An interesting thing is that the term existed well before this in the English language as a derogatory term for someone large, awkward and a bit dull (usually foreigners), and it also survives in the term mumbo-jumbo. So it's ironic that it now is applied to a large, sophisticated aeroplane. On browsing around I found that it is also the name for a particular type of large drilling device used for cutting tunnels at high rates, so it seems to have become the name for large but laudable things both above and below the surface.

What was measured as a penny size?

The answer is, surprisingly, nails in the U.S.A. It began as the price for one hundred nails of the particular size (they often refer to their one cent coin as a penny), but then came to represent the size, even after inflation raised the actual price. The sizes ranges from 2 to 20, and here is a selection.

2 penny	1.0 inch	875 per pound weight
4	1.5	300
8	2.5	100
16	3.5	45

What are Q, Q scale, quad, and Q unit?

What a fascinating letter is the Q as used in the English language. For a start it seems to be afraid to venture out without a "u" to chaperone it. I don't know why it is so shy, because it seems to be held in high esteem by the science and engineering community, and has been assigned the responsibility of representing many quantities.

In physics it has been used as the symbol for the coulomb, the unit of electric charge, equal to the charge produced by one ampere for one second.

It has also been used in physics as an abbreviation for the Q-factor which is the selectivity of a resonant circuit.

In engineering it has been used for flow of various kinds, generally as cubic metres per second.

In geology the Q scale relates to the time for earthquake vibrations to die down.

The Q unit, also known as the quad, is an obsolete Imperial unit representing a very large amount of heat, to be precise, one quadrillion (10^{15}) British Thermal units.

Finally in radio communications the Q band is the range 36 to 46 gigahertz.

What is a dol?

This is a discomforting unit, used to measure pain levels. The discomfort comes (for me at least), from the thought that it was established using an instrument called a dolorimeter to inflict pain on subjects using a heat lamp. Ouch!

What is a brig (and I do *not* mean a ship's prison)?

It is the name for any scale based on ratios using logarithms of base 10, for example the decibel scale used for sound levels. It is named after Henry Briggs who originated so-called common logarithms in the 17th century. I have no recollection of hearing of Briggs before, and so was surprised to read of his achievements.

Around 1577 Briggs entered St. John's College Cambridge, and after attaining his degree he began research in astronomy and navigation. In 1596 he was appointed the first professor of geometry at the newly opened Gresham College in London, and

for more than two decades he was instrumental in establishing it as a major centre for scientific research and advanced mathematical instruction. He also took an active part in bridging the gap between mathematical theory and practice. He instructed mariners in navigation, advised explorers on various proposed expeditions, and invested in the London Company which founded the colony of Virginia in 1607. He was among the first to disseminate the ideas of the astronomer Johannes Kepler in England.

When Napier published the first treatise on logarithms these were based on the transcendental number 1/e (where e is the exponential number, approximately 2.718), and this inspired Briggs to propose logarithms using base 10, which would be of far more practical use, particularly for people such as navigators. In due course he published tables of logarithms for numbers from 1 to 20,000 and 90,000 to 100,000 all computed by hand to 14 decimal places!

Incidentally I found that Edmund Gunter (remember Gunter's Chain?) was a friend of Briggs, and invented a navigational tool which was the first slide rule using a logarithmic scale.

What is a centiare?

All those who did not get this one deserve to fail for inattention. What is an *are*? What is a *hectare*? Have you got it now?

What is the corn-hog ratio?

It sounds strange, doesn't it? It is actually the ratio of two prices, one the sale price of a pig of a particular weight, the other the cost of corn to feed it. So it is a crude measure of the profitability of producing pigs.

Frog units

Digitalis is one of those natural compounds that have been used for centuries for both good and evil. It is known to have been prescribed for "dropsy", a disease in which fluid builds up excessively in the body, in the 18th century. It is still used in various artificial forms for the treatment of heart conditions. But it is also very poisonous in excessive amounts, and when it was prepared from foxglove leaves the concentration was quite variable. To assess a particular batch a test was performed to see what proportion of a batch of frogs was rendered unconscious (or dead), by a solution, and this gave the number of frog units.

If this test sounds a bit callous to you, a similar measure is still used today to rate toxins, called the LD50 test. The LD50 is the amount that kills 50% of a batch of poisoned laboratory animals, typically mice or rats. You may be interested in some information from my files about the number of LD50 mouse doses there are in a single bite of some Australian snakes:

Black	700
Copper	2,500
Brown	4,000
King brown	5,000
Tiger	15,000
Common taipan	95,000
Inland taipan	218,000

Now you know why you are advised not to tramp around in bare feet in brown snake territory. Oh, and stay away from the inland.

Something New

This has been the last Quantification article based on questions. I feel that this format has run its course so next time it will just have some interesting and relevant stuff to entertain you.

Riverbank Reflections 9

Ron Cook

Scotchman's Creek has a series of rush filled ponds that help clean up the water before it continues into Gardner's Creek, the Yarra River and Port Philip Bay. This is an excellent low cost method that works well. Judging by some of the sudsy water draining into the creek the other day it's an absolute necessity.

Talking of suds I recently had a need to look at AS/NZS 2007.1:2005: "Performance of household electrical appliances - Dishwashers - Methods for measuring performance, energy and water consumption". The testing requires soiling a twelve place dinner set consisting of dinner plates, bread and butter plates, soup bowls, tea saucers, tea cups, glasses, knives, forks, desert spoons, soup spoons and tea spoons and then scoring the washed items on the amount of soiling remaining after washing by the machine. From the average score comes a machine rating.

There is a standard procedure for soiling these items, using food such as eggs, spinach and baby food. Also to minimize problems with variability in the soiling material and the detergent and so on, a reference washing machine is used. The washing score of the test machine is based on the quantity of material left on the dinner set (area and number of spots) and is normalized by dividing by the score from the reference machine that has washed a nominally identical set of soiled items.

This is certainly a different type of measurement, but it is nevertheless a measurement and has therefore a measurement uncertainty.

The reference machine is in effect a "golden artifact standard". It is analogous to a conventional true value. Before looking at some of the associated issues I'd like to digress to consider some other and to some extent similar "gold standards".

Standard Reference Materials (SRM's) have been used for a very long time and these fill a role in calibrating or normalizing test results. It is only in the last decade that industry has given much thought to the uncertainty in the SRM. It used to be selected on the basis of a compromise in price and claimed purity. SRM's may be chemicals or other materials such as gas mixtures with defined components. The uncertainty of the SRM is now routinely determined and included in measurement uncertainties.

When I worked in a factory we had many types of gauges that were commonly used to make a rapid in-line measurement. "Go No-Go" gauging was used for testing all kinds of holes and rods. Gauge making was expensive and required the best of personnel and machines. If you were making a state-of-the-art aircraft it was sometimes hard to make a device that was more advanced and more precise to use as a gauge.

For hydraulic pipes we had a partly built aircraft fuselage with fittings that the finished pipe was required to slip into without forcing. A poor fit meant a rework. Alternate jigs made use of wires bent into the correct shape and were used to compare the bent pipe with the correct shape during manufacture. Steels balls were fed into the piping and if they didn't come out the other side the pipe had been flattened too much and was rejected. Another "Go No-Go" test.

Gauges, particularly the traditional "Go No-Go" variety still are made and make up a large part of the work for the factory metrology laboratory. Maintaining traceability of the measurements and calculation of uncertainties are very routine activities. Increasingly verification of the manufacturing process relies on Co-ordinate Measuring Machines (CMM's). The programming of these is quicker and cheaper than making test gauges. Sometimes a "golden sample" is used to "teach" the machine what measurements to make. If a Computer Aided Drawing (CAD) drawing exists it can be downloaded from the computer directly to most CMM's. The CMM can then measure the dimensions of the test item and compare the values with the drawing values.

In the case of the CAD drawing the tolerances and measurement uncertainties can be accounted for, but when a "golden sample" is used it is much harder to assign an uncertainty. The client wants 10,000 more just like the sample. The first question is how much like the sample? The second is does the sample have any uncertainty?

It is certain that the sample will have some deviations from a perfect artifact, but presumably the client is comfortable with those. If these uncertainties remain undefined then they can not easily have a value assigned and can only be taken to be zero. In other words we have a standard with conventional true values – in this case defined by convention – without uncertainty.

Having a standard without an inherent uncertainty makes most metrologists uncomfortable. Even the speed of light usually has an uncertainty as we use it in a real atmosphere for which there are corrections with uncertainties. Unfortunately there are many instances where there is a standard without readily assessable uncertainties.

There are some other examples. Colour patches or swatches are often used for matching colour of fabrics, dyes and paints. One of my neighbours used to talk about how the paint factory he worked in used analysis equipment to produce a standard colour but the final tinting was determined on the decision of the Chief Colour Matcher who would look at the product and then give instructions of re-tinting. I am not aware of any calibration being applied to the Chief Colour Matcher; however I did once work alongside someone with a calibrated eyeball.

This person was involved in design of camouflage patterns and coloring for military purposes. Periodically he would go on a field trip and try to detect the camouflaged troops, jeeps and tanks hidden in the bush at a test site. Sometimes he would bring back photographs and the rest of us in the building would get a chance to look for the hidden objects. The camouflage designer had annual eye tests for acuity and color response and got a certificate with the results – a calibrated eyeball! He and the other observers were the camouflage detection standard. Uncertainty? What was that? We saw the soldier or we didn't.

The traceability was debatable and the uncertainty undetermined. Yes the tests were done more than once and the pooled results used to rate the effectiveness of the new camouflage, but without special instrumentation the process was highly subjective. Later on instruments had to be used when it was found that viewing the battle scene with infra red sensitive viewing apparatus rendered the established camouflage useless. Today different camouflage patterns have an associated probability of detection.

How does this relate to the dish washing machines? Well the reference machine results depend on the machine itself, hopefully a constant, the inspector of the washed plates and his estimation of the degree of soiling, the detergent uniformity, the water uniformity and the plates themselves for a start.

It is easy to take the score for each item and arrive at an overall average score and an associated standard deviation of the mean. The standard uses the ratio of average scores for the test and reference to get a rating factor. A resulting number greater than 0.9 is deemed to be good.

The standard does not address the issue of variance of the results or uncertainty. If a laboratory wants to be accredited to AS/ANZ ISO 17025 then a measurement uncertainty is required. And then of course than we start getting into consideration of the zones of uncertainty which complicates rating the washing capability of the test machine.

It seems to me that the only approach here is to do the tests exactly as per the standard and to report the results as required by the standard using the standard's method of calculation.

The measurement uncertainty should be expressed as twice the standard deviation of the mean score for the machine being tested. This incidentally typically exceeds 10%. At the very least it gives a measure of the variability of the tested washing machine for different items and the variability of wash through the machine

The variance associated with the average result is the unresolved issue here. The inspector's ability to determine what score to give the washed item a score is subjective to some extent. The score ranges from 0 to 5 depending on the area and number of soil patches. A score of 5 means no soiling was detected and 0 for more than 200 square mm of soil. Two assessors can be used to independently assess the wash and the scores combined.

Machine vision could be used, along with calibration templates, to give consistent inspection. This would come at a cost. By eliminating the variability of the inspection process, the remaining variability will be a function of the machine, the detergent, the water and the uniformity of the soiling.

The uncertainty of the reference washing machine results could be used as a quality control measure to monitor the consistency of the process even if ignored otherwise.

As far as the standard is concerned the reference machine provides a means to remove or minimize the variation of the plate soiling and the effectiveness of the detergent and water. Clearly the selection of a reference machine needs to be done as required by the standard.

Eventually the issue of dealing with variance of the testing process must be addressed by the committee involved with the standard. The need to meet the international standard on laboratory accreditation is supposed to be taken into account by standards writing committees, but many standards have legacy components going back a hundred years. Eventually the issues will be resolved. This is part of the process of improving our testing and measurement and making ratings less subjective and more fact based. In the meantime laboratories must often operate in muddied and turbulent waters.

Meanwhile back on the creek bank the large number of water birds in the filtering ponds suggests that the water is being cleaned up. That number might also be the basis of a field measurement for filtering effectiveness, but I think that's enough for this time. ■

The Metrology Society of Australia Incorporated

Announcement and Invitation to the Annual General Meeting for the MSA 2007

to be held at the

Lakes Resort Hotel

West Lakes, South Australia

Friday 27th July, 2007 at 3:30 pm

The formal AGM will be conducted as part of the MSA Biennial Conference on Metrology

The agenda for the meeting will be as follows

- Apologies
- Minutes of the previous AGM
- President's and Treasurer's Reports
- Election of Office bearers
- Motions presented (see below)
- Membership Subscriptions
- Close of meeting

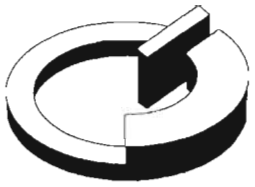
Nominations for the National Committee of Management are sought and should be with the Secretary no later than close of business on the 20th July 2007.

Motions

1 That Marianne Philips be elected to the position of auditor for the MSA.

2 Amendment to section 5 to add; 5.(5) The entrance fees and annual subscriptions may be varied from time to time by the Association at a national committee meeting by an amount not exceed 10% per annum applied once per financial year.

3 Amendment to section 5.(2) to read; 5.(2) The annual subscriptions for Associate Members, Members, and Fellows are to be set by vote at the annual general meeting as required and are payable in advance on or before the end of the first quarter in each year.



METROLOGY SOCIETY OF AUSTRALIA

NOMINATION FORM

To the Secretary
Metrology Society of Australia

We,

_____, Member No _____

and

_____, Member No _____

hereby nominate

_____, Member No _____

for election to the position of (circle one)
President
Vice-President
Secretary
Treasurer
Ordinary committee member

of the Society at the MSA's Annual General Meeting of 2007.

Signatures

Nominator _____

Seconder _____

I affirm that I am willing to stand as a candidate

Nominee _____

Date _____

METROLOGY SOCIETY OF AUSTRALIA

APPOINTMENT OF PROXY

To the Secretary
Metrology Society of Australia

I, _____,

Member No _____

Hereby appoint

_____,

being a member of the Metrology Society of Australia, as my proxy to vote for me on my behalf at the 2006 AGM of the Society and at any adjournment of that meeting.

Signed:_____

Date: _____

Note: This Proxy form must reach the Secretary 24 hours before the AGM.

mti

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Heat and Temperature
Electrical

Abstec is also licensed by the Office of Consumer and Business Affairs (SA) to service and certify weighing systems used for trade. Licence Number TML 169271.

Abstec's extensive NATA accredited capability allows our customers to save time and money by taking care of your complete calibration requirements. Through Abstec's experienced and competent technical and administration staff, further strength is given to our accreditation capability.

NATA Turns 60

Reliability of testing is largely invisible to the public. However, it is absolutely fundamental to almost every aspect of domestic and business life, including its impact on legal metrology, transport and defence systems, software security, environmental monitoring and protection, public health and safety, pathology services, occupational health, forensic services, construction, agriculture, mining and general commerce.

More than sixty years ago, Australia developed a system for ensuring laboratory competence, and hence test reliability. In February 1947, this system led to the formation of the National Association of Testing Authorities, Australia – NATA – a non-government, not-for-profit association, which is the largest and oldest such organisation in the world. NATA currently has offices in five State capitals, employs around 160 people, and relies extensively on the voluntary services of almost 3,000 expert scientists, engineers and technologists to help evaluate the competence of accredited facilities. The NATA model has been adopted by more than 70 countries.

These days, goods are traded across national borders, so there was a need for international acceptance of test data. This spurred the development of mechanisms to help reduce technical barriers to trade through mutual recognition of accreditation bodies. NATA is a signatory to the International Laboratory Accreditation Cooperation (ILAC) and the Asia-Pacific Laboratory Accreditation Cooperation (APLAC). ILAC celebrates its 30th year in 2007.

While NATA's early focus was on industrial support, its accreditation now covers the full gamut of testing and measurement needs in Australia. As CEO Tony Russell put it "NATA is evolving all the time and increasingly finds itself working in spheres it would never have dreamed of when it was first established. For example, NATA is becoming increasingly involved in sciences that have a direct social impact, such as forensic science services."

"We believe Australia has benefited greatly from the added confidence which NATA's accreditation activities have provided over the past 60 years. But we recognise that a pioneer can only remain of value if its focus is on the future, not the past," Mr Russell said. Through its staff and technical resources, NATA is constantly striving to address that challenge.

An invitation to join the Calibration Industry Training Network

Background
Manufacturing Learning Australia is a not-for-profit industry training advisory body which has obtained funding to facilitate the development of a Calibration Industry Training Network.

The project will develop partnerships and new ways of working between companies, regulatory bodies, industry associations and Registered Training Organisations to bring about innovative and flexible approaches to skills recognition and development for calibration technicians across Australia.

What's in it for me?
By participating in the network you will have an opportunity to gain and share information, hear from industry and training experts, hear about the latest initiatives and influence the development of a pool of well trained and qualified calibration technicians for the future. The network will address issues such as;

- The skills shortage and workforce recruitment and retention
- Moving on from non-accredited training to Nationally accredited competency based training and assessment
- Regulatory requirements
- Career pathways, traineeships and cadetships
- Options for provision of training and assessment including recognition of existing skills
- Employability skills
- Implementation of skills sets

You can participate in a number of ways – by attending meetings and workshops, by receiving and contributing to an enewsletter, by teleconference or by the use of chat rooms and websites, or any other way that suits you. If you would like to participate please contact

Wendy Davies - Project Manager
Manufacturing Learning Australia
03 5674 6024
wendy@mlaust.com

MSA Victorian Section Meeting

31 May 2007

The May meeting of the Victorian section of the MSA was held at the premises of Mettler Toledo in Port Melbourne. 17 People attended and it was good to see some new faces.

After some light refreshments Ron Cook presented a talk on the measurement of speed.

Ron looked at the types of speed measuring devices, missing out on the speedometer for which he apologised. Ron explained the general speed measurement principles associated with pressure, optical, electromagnetic, magnetic and Doppler GPS speed measuring devices. He then summarised the types of sources of error that can be found when using these devices. Ron noted that smart signal analysis based on military radar is a new development in speed measurement.

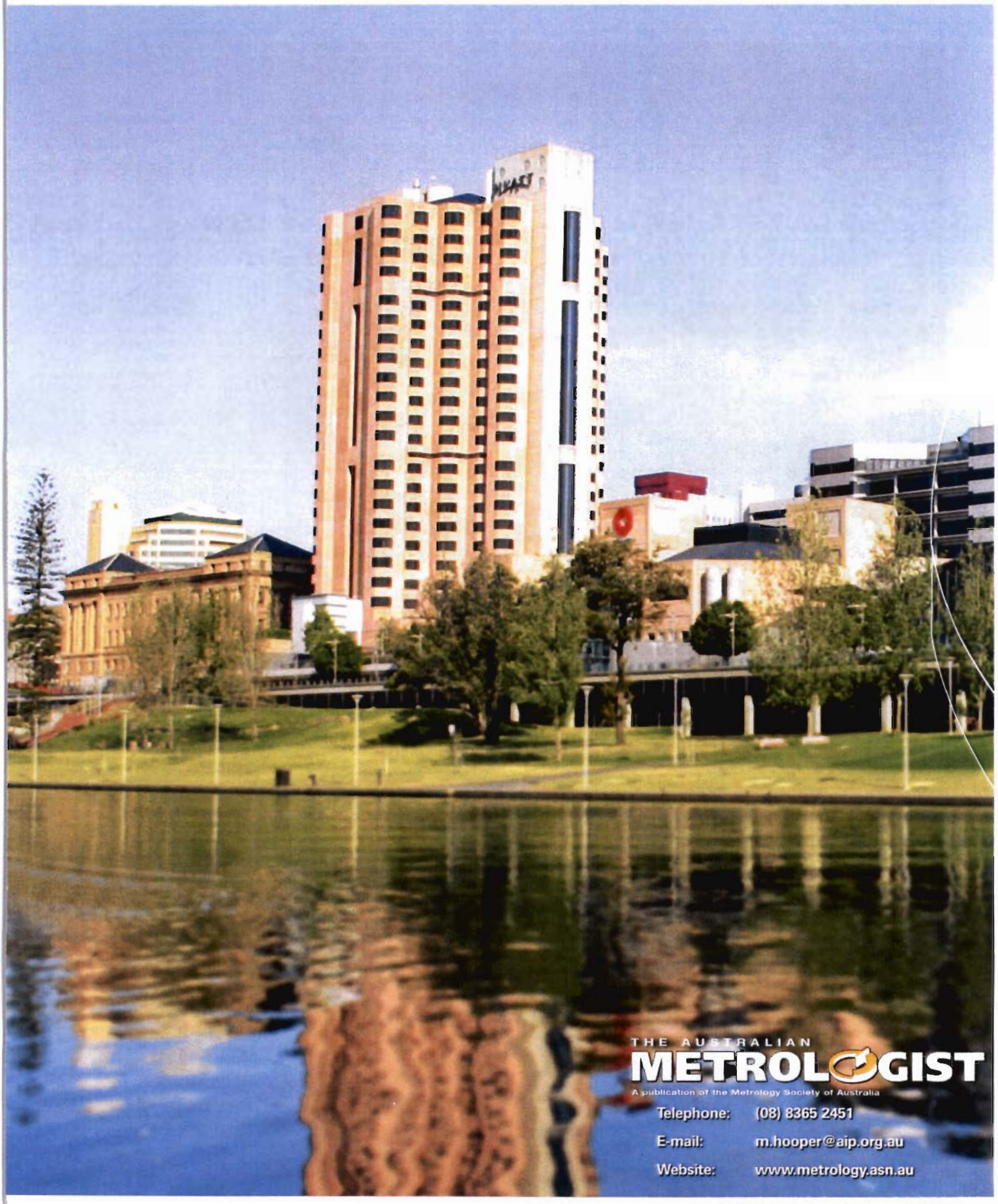
Ron concluded by advising the meeting to pay up if caught speeding and not to call him to assist in your defence.

Mr John Farrar from the Victorian Justice Department was in the meeting and was able to field questions on the problems with speed measurement of vehicles that had made the papers over the past 12 months. The meeting had a good discussion on the measurement of vehicle speed and the problems that have been encountered in Victoria.

Again, the Victorian section of the MSA thanks Mettler Toledo and Keith Fordham in particular, for the use of their meeting room.

The next meeting will not be September/October as the MSA Conference is being held in July. The speaker for the next meeting is still being sought. You will be advised by email.

Following are photos taken on the night.



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Telephone: (08) 8365 2451
E-mail: m.hooper@aip.org.au
Website: www.metrology.asn.au