

## IPENZ Fellow and Transit head is 'Man of the Year'




Transit New Zealand's Chief Executive Dr Robin Dunlop was named International Man of the Year at the International Road Federation's conference in Sydney early this month.

"In merited recognition for his pioneering activities and achievements in the realm of asset management and road funding, which have contributed to the advancement of road sector

development in his country and throughout the world. His vision and dedication are an inspiration to all involved in the future of roads and road transport."

Dr Dunlop said his award recognised the high regard that Transit was held in worldwide for its innovative road management practices. The award was also a testament to the quality of the New Zealand roading contracting industry.

The International Road Federation is a non-governmental, not-for-profit organisation with public and private sector members in 70 countries. It promotes the development and maintenance of better and safer roads, as well as innovative technical solutions and management practices.

Dr Dunlop was elected as a Fellow of IPENZ in 2002, for his substantial and ongoing contribution to the development of engineering practice and as a leader in highway design. 

## President's Message

# In consultation



Consultation associated with the introduction of the Chartered Professional Engineers Register is now well under way, and comments and more formal submissions have been received from many members and other stakeholders.

Predictably, much of the focus has been on the code of conduct. You may recall an earlier column about the difficulty of devising a code of

conduct that can operate effectively in the real world of professional engineering. The key issues for members have been whether the code of conduct should place responsibilities upon a practitioner beyond those already established by common law; if so, to what extent; and how best to resolve the potential conflict between the duties of care that professional practitioners owe respectively to their clients and to the community.

Concern has been expressed about whether the code might be used as a benchmark outside the law courts, and might thus influence the process of mediated or arbitrated settlements of commercial disputes. The existing aspirational Code of Ethics does not seem to have been used in this way, but the statutory backing that the code of conduct will enjoy might make a difference. We are currently taking legal advice on this point, and checking out the experience of international institutions that manage similar systems.

There are no easy answers to these questions. The conflict between duty to clients and duty to the community has been debated for at least two millennia. However, a constructive debate is taking place in the context of the consultative process, and its outcome will be reflected in the revised versions of the code of conduct that appear on our website over the next few weeks. Your continuing contributions will help to ensure that we devise a workable and widely accepted code of conduct, which is expressed in terms of minimum standards, but which reflects government and community expectations of the competence and integrity of professional engineers.

Codes of conduct can be used by disappointed clients or others as weapons against practitioners who may simply have been victims of circumstances. Engineering can never be an exact science, and large or complex projects are particularly vulnerable to the operation of that most fundamental and well-understood engineering principle – "if anything can go wrong, it will". However, codes of conduct, properly framed, can also provide a shield for the conscientious practitioner, who should be able to demonstrate that they have worked within code requirements, and made an honest and reasonable effort to avoid the problems that have arisen.

There have also been interesting, if less heated, debates about the standards and processes for competence assessment. Initial assessments for beginning practitioners have posed relatively few problems, since the standards used will be more or less identical to those already in place for admission to MIPENZ.

Continued overleaf >>>

## Remuneration Survey reminder

The IPENZ **Remuneration Survey 2002** has been distributed with the August issue of *engineering dimension*.

If this survey is to yield valid results, IPENZ members must respond accurately, and in sufficient numbers. So we urge you to complete and return this questionnaire if you haven't done so.

To be in the draw to **win a weekend at the Grand Chateau** return the completed survey before **3 October** with your business card attached, or fill in the survey at [www.ipenz.org.nz/ipenz/members](http://www.ipenz.org.nz/ipenz/members).

However, even in this situation, the need to have the new CPEng Rules expressed as Regulations, and hence subject in principle to the scrutiny of Parliament, has meant that the existing standards have required some reworking to ensure that points that would have been implicit in the framework of an assessment undertaken by any professional association are made explicit, and that assessors' guidelines are sufficiently clear to stand up to legal challenge.

The issue of initial assessments for experienced practitioners, and continuing assessments in general, has created rather more controversy. To be entered on the CPEng Register, a qualified practitioner must demonstrate that they are current and competent. That seems likely to require, at a minimum, that each candidate submits a comprehensive CV, detailing the professional engineering work they have undertaken and the professional development they have completed since they were last subject to assessment.

The claims made should be capable of verification, nominated referees being the most obvious mechanism. In contrast with past IPENZ practice, however, the Rules will not specify a quantum of CPD

that should have been completed over the relevant period. Instead, the practitioner will be expected to demonstrate that, whether they have continued to practice in their established field, or have shifted and/or extended their areas of competence, they have taken reasonable steps to maintain their knowledge and skills at an appropriate level.

These requirements are easy to state, reduce compliance costs for registrants, and should be relatively non-intrusive. However, the new system will require a more substantial exercise of professional judgment by reviewers than a system based on essentially quantitative assessment of CPD. That means, of course, that the system will cost more to operate, and the cost will ultimately have to be carried by the registrants. Your views on this point would be useful.

Alongside work on the CPEng Register (which has taken top priority, given the need to have the new system in place by the beginning of 2003), we have been exploring your views on a range of related issues, including the nomenclature for IPENZ membership grades once the CPEng systems are in place, whether

or not IPENZ should operate parallel registers for engineering technologists and engineering associates, and, if so, what those registers should be called.

The issue of membership grades does not seem to have been controversial. There appears to be a general consensus that the revised nomenclature proposed by the Governance Board is acceptable, so:

- MIPENZ = Professional member
- TIPENZ = Technical member
- AIPENZ = Associate member
- GradIPENZ = Graduate member

The question of whether to operate three registers has been subject to more debate, and quite a few respondents have pointed out, very sensibly, that we should be careful not to over-extend our administrative capacity, and should therefore defer introducing the registers for engineering technologists and engineering associates until the CPEng Register has settled down.

For the sake of compatibility with international practice, and because the system would be useful within New Zealand, there seems to be general agreement that we should implement the second and third registers (which will not enjoy statutory backing, but can be protected under trade-mark legislation) at a more appropriate time.

However, the nomenclature for these registers has been the subject of some vigorous debate. We initially explored the possibility of following Australian precedents and using the "Chartered" descriptor for all three registers. However, that proved not to be legally possible and, in any case, we received an emphatic message (from technologists and associates as well as from professional engineers) that a greater degree of differentiation was desirable. We have taken some soundings amongst the members most affected, and the results are summarised in the diagrams.

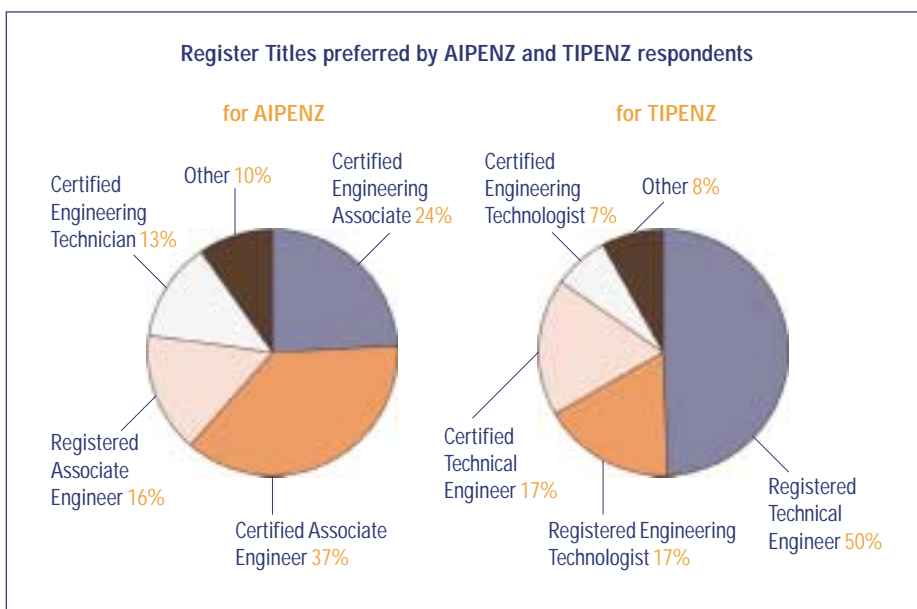
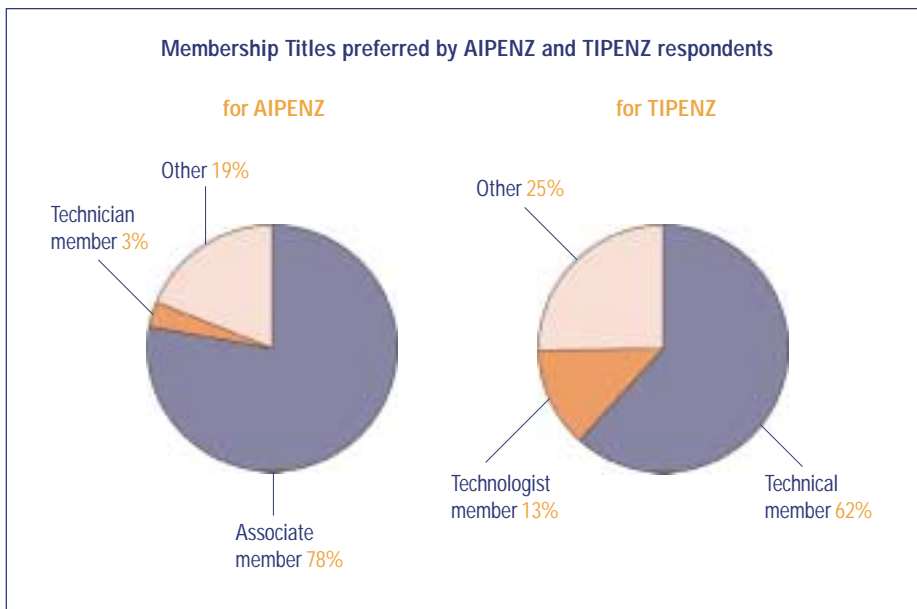
The most popular choices were:

- Technical members = Registered Technical Engineers
- Associate members = Certified Associate Engineers

Note that we cannot use "Registered" in relation to engineering associates, because of the danger of confusion with the existing statutory "Registered Engineering Associate" system. That system may not long survive the introduction of our second and third registers, but the memory of the REA system will linger for some time thereafter.

I would now welcome the views of the membership on the matter. Remember that the CPEng system will be in place, and strong promotional activities will have raised public awareness of it, well before the second and third registers can be put in place. There seems only minimal risk of causing significant confusion in what is, after all, a fairly well-informed market-place, here or overseas; and there is a real issue of fairness and equity to an important group of our members. ☺

**John Webster**  
President



# Meritec merger

Meritec, a leading New Zealand consultancy, has joined LA-based AECOM group of companies.

Meritec is one of New Zealand's largest employee-owned firms. A succession of mergers expanded the original engineering capabilities of Worley Consulting, which specialised in mechanical and electrical engineering, to create a multi-disciplinary architectural and engineering complex.

Meritec has been involved in a string of landmark projects in New Zealand – the Waikato Performing Arts Complex, the Manapouri tailrace tunnel, Te Irirangi Drive, the Taranaki Combined Cycle power station, and Starship Hospital Child and Family Unit. It has also established a presence and undertaken major projects in Australia, South America, the Middle East and South East Asia.

Meritec CEO Ian Parton says the merger partners really chose each other. Meritec needs a global partner to maintain its expansion, while AECOM's strengths complement its own. The merged firm will have a greater global reach, and will be able to take on major overseas infrastructure projects.

Meritec will continue to operate under its own name in New Zealand, and will work with AECOM company Maunsell in Australia, Asia and the Middle East. ☺

# Performance improvement online

Massey University's Centre for Organisational Excellence Research (COER) has launched a new website designed to help subscribing businesses improve their performance.

theBPIRcom – the Benchmarking and Performance Improvement Resource – is an online database of resources, classified so as to facilitate effective searching. Classification is according to the terminology of internationally recognised models of business excellence, such as the Baldrige Model and the European Business Excellence Model.

The site's resources include performance measures, benchmarks, award winners' details, improvement tools and techniques, best practice case studies and online access to more than 600 business periodicals. Subscribers can use the databases to analyse their competitors' performance; and there is a discounted self-assessment service to clarify their own organisation's strengths and weaknesses.

Research registers offer access to current research worldwide in areas including advanced automation, Internet technologies and E-Commerce, the built environment, quality assurance, and environmental management.

Membership queries can be addressed to [membership@theBPIR.com](mailto:membership@theBPIR.com) ☺



## Awards 2003

Members are invited to submit nominations and entries for the IPENZ Awards 2003, which include the IPENZ Annual Awards and the IPENZ Supreme Awards for Engineering Excellence. Awards will be presented to winners and finalists at the IPENZ Awards Dinner during the IPENZ Convention in late March next year.

Projects entered must be at least 80 per cent complete by 4 November 2002. For more information contact Bronwyn O'Keefe on (04) 474-8934 or email [bokeefe@ipenz.org.nz](mailto:bokeefe@ipenz.org.nz). Entry forms with supporting information are available on the IPENZ website [www.ipenz.org.nz](http://www.ipenz.org.nz). Entries must reach IPENZ National Office by 5pm Monday 4 November 2002.

Entry is open to the following IPENZ Awards:

**IPENZ Supreme Awards for Engineering Excellence**, sponsored by **Tranz Rail New Zealand**, celebrates innovation and excellence in projects, taking account of economic, social and environmental development, innovation and "engineuity" in concepts and/or materials, the economic efficiency of resources, and design integration. There are seven categories: Building and Construction, Infrastructure, Information Technology and Networks, Manufacturing and Mechanical, Food and Bioscience Engineering, Energy, and Multidisciplinary for projects outside these categories.

**IPENZ Young Engineer of the Year Award**, sponsored by **Works Infrastructure**, recognises a young engineer who has made an excellent contribution as an engineer or leader, and/or through community involvement. Entrants must be aged 35 years or under at 31 December 2002, with a tertiary engineering or technology qualification. First prize is \$2000 from a total prize pool of \$3000.

**IPENZ Entrepreneurial Award**, sponsored by **ALSTOM New Zealand**, recognises an engineer or engineers who have created or developed a new business opportunity.

**IPENZ Innovation Award**, sponsored by **Meridian Energy Limited**, recognises an engineer or engineers who have demonstrated a commitment to innovation in engineering practice throughout their career, by creating new designs or concepts.

**IPENZ Environmental Award**, sponsored by **BP Oil New Zealand**, is awarded for the engineering work that best exemplifies care for environmental values. Account is taken of the recognition of environmental values in design and in the resolution of problems, and of the overall contribution the end result makes to environmental values and public enjoyment. Projects may be of local or national importance. The recipient of the award may be an individual, or a public or private body; an individual need not necessarily be an engineer or a member of IPENZ.

**IPENZ Student Design Award**, sponsored by **Meridian Energy Limited**, is open to all undergraduate engineering students at New Zealand universities or polytechnics and recognises engineering excellence at the student level, rewarding innovation and entrepreneurial potential. First prize is \$2000 from a total prize pool of \$3000.

**Entries for the Awards close on 4 November 2002.**

For further information, or entry and nomination forms, please contact: Bronwyn O'Keefe on +64-4-474 8934 or email [bokeefe@ipenz.org.nz](mailto:bokeefe@ipenz.org.nz). Entry forms will also be available on the IPENZ website [www.ipenz.org.nz](http://www.ipenz.org.nz) ☺

# 2002/2003 Subscriptions

With the replacement of the membership record system software members will see very different subscription notices from National Office. Chief Executive Dr Andrew Cleland discusses the changes.

First, the bottom line. The Board has resolved that the subscription paid by most members (Member, Fellow, Technologist or Associate grades) will increase by approximately \$10–15 for the coming year. This follows no change in 2001/2002 and a rise of \$10.00 in 2000/2001. The rate of increase is lower than the inflation rate. For Graduates there will be a substantial change. At present there is a six-step scale. It will be replaced by a single fee, with a rebate for recent graduates. Depending on which step graduates previously occupied, the fees for some will increase, and for some will actually decrease.

Retired members have had no increase in fees for many years. A rise in fees is therefore proposed, roughly equal to inflation since the last change, and still well short of covering the cost of the services delivered. The provision of *engineering dimension* and budget allocations to Branches for retired members are new costs since the last rise.

Why the changes to the fee structure? There are two primary reasons. First, at present the same people are sent three separate invoices (technical groups, IPENZ, registration) from the same database at slightly different times. The transaction cost of invoicing, reminding, receipt of payments etc. is far too high. We are moving to put almost all items on a single annual invoice covering all services.

The second reason is that we have been moving toward transparency on costs, so that groups of members who receive particular services will pay the costs of those services directly. As we bring CPEng online we need to ensure that costs are fairly apportioned. For example, in the past the costs of internationalisation or mobility of our competence brands and qualifications were borne only by IPENZ members. This will not continue.

The new invoice will look rather like a gas or electricity bill – the front page will give a summation of costs for the package of memberships you hold (less any apportionment for payments made directly by your employer), and a second page will set out how those charges arise.

The key elements of the new charges:

**1. Service centre fee:** This covers the cost of maintaining a record for you on the database system. It includes billing you, receiving monies, paying any credit card or other monetary charges etc. It is paid once per invoice by everyone. A member of IPENZ and three Technical Groups who is also a CPEng registrant, will pay it just once. If you are an IPENZ member only, or a member of a Technical Group only, you will still pay the same amount. Where there is an entitlement for remission of the fee, then the fee, the rebate, and the net amount to be paid will appear on page 2 of the invoice.

**2. Qualification recognition (mobility) fee:** This covers the cost of mobilisation (via recognition) of your qualifications and competence recognition. Benefits from recognition flow to all members in the grades of Graduate, Technologist, Associate, Member and Fellow, and also to those holding competence-based registrations (CPEng, APEC Engineer, International Professional Engineer). Therefore it is paid once a year by each person meeting one or more of these criteria, but is rebated for retired persons in these grades on the basis that in retirement you no longer need your qualifications recognised!

**Table 1** I am MIPENZ, not a member of a Technical Group and not CPEng; two cases are shown – retired and fully employed or active.

	2001/2002 invoice		2002/2003 invoice	
	Active	Retired	Active	Retired
Employment status	Active	Retired	Active	Retired
Service centre fee	n/a	n/a	\$26.67	\$26.67
Qualification recognition fee	n/a	n/a	\$50.00	n/a
Subscription	\$360.00	\$88.00	\$320.00	\$320.00
Branch subscription (typical)	\$25.00	\$0.00	n/a	n/a
Retired rebate	n/a	n/a	n/a	\$235.00
Total (exclusive of GST)	\$385.00	\$88.00	\$396.67	\$111.67

**Table 2** I am registered under the 1924 Act and will be a CPEng. Two cases, with and without IPENZ membership, are shown. (?) = to be determined

	2001/2002 invoice		2002/2003 invoice	
	Yes	No	Yes	No
IPENZ Member	Yes	No	Yes	No
Service centre fee	n/a	n/a	\$26.67	\$26.67
Qualification recognition fee	n/a	n/a	\$50.00	\$50.00
IPENZ Subscription	\$360.00	n/a	\$320.00	n/a
Branch subscription (typical)	\$25.00	n/a	n/a	n/a
1924 Act annual fee	\$26.67	\$26.67	n/a	n/a
CPEng fees	n/a	n/a	(?)	(?)
Total (exclusive of GST)	\$411.67	\$26.67	\$396.67 + (?)	\$76.67 + (?)

**Table 3** I am a recent graduate and a member of one Technical Group.

	2001/2002 invoice		2002/2003 invoice	
	Yes	No	Yes	No
IPENZ Graduate Member	Yes	No	Yes	No
Service centre fee	n/a	n/a	\$26.67	\$26.67
Qualification recognition fee	n/a	n/a	\$50.00	n/a
IPENZ Subscription	\$110 or \$160.00	n/a	\$240.00	n/a
Branch subscription (typical)	\$25.00	n/a	n/a	n/a
IPENZ early graduate rebate	n/a	n/a	\$135.00	n/a
Technical Group	\$30.00	\$30.00	\$25.00*	\$25.00*
Total (exclusive of GST)	\$165.00 or \$215.00	\$30.00	\$206.67	\$51.67

\* = expected reduction due to removal of \$5-10 payment from Technical Group to IPENZ coinciding with the introduction of service centre fee.

**3. IPENZ membership fee:** This has been restructured into a fee for each membership grade and a range of rebates according to membership status (life, retired, overseas, or recent graduate membership). The full subscription will be stated on the first line, and then any rebates. Branch subscriptions are no longer separately itemised, but are built into the total subscription. Each Branch receives \$25.00 per subscription-paying member, other than retired members for whom it receives \$12.50.

**4. Technical Group fee:** Fees for each Technical Group of which you are a member appear in this section. The fees have two components – the base membership fee for that group, and any rebate or additional charge for membership of an affiliated organisation. For example, in the NZ Geotechnical Society you can choose to pay an extra amount for membership of one or more affiliated international groups. Fees for membership of INGENIUM and the Institute of Gas Engineers do not appear on the unified invoice.

**5. Registers:** This area will not appear on the October 2002 invoice, but in future years the fees for CPEng, APEC Engineer and the International Professional Engineers register will appear here. If we establish registers for Technologists and Associates the associated fees will also appear here.

**6. Publications:** This section will not operate in 2002 but purchase of subscriptions to publications may be included in the future.

**7. Optional services:** In the future we will be able to provide purchase opportunities e.g. for recent engineering publications at discount rates.

**8. Donations:** There will be an opportunity to donate to the current four charities and the new IPENZ Foundation.

We have also moved to liberalise payment methods so that all invoices over a specified threshold can be paid by direct debit and credit card. This facility was not available for all invoices in the past.

This may all seem rather complex but the examples in the three tables may clarify the invoicing system. ☺

# Design documentation guidelines

**For years the building sector has lacked a common language to describe the various design services available, and their applicability to particular building requirements. This has resulted in misunderstandings among designers, builders and their clients, sometimes with expensive consequences.**

Through the Construction Liaison Group the industry has developed a set of guidelines that define the possible design stages in a building project. They cover architectural, structural, electrical, mechanical, hydraulic, fire protection, HVAC, data and communication, and ancillary services. Comprehensive checklists of the range of services available are included. This should make it easier for clients to discuss their needs with builders, architects, engineers, or others involved in building projects.

The documents will be trialled for 6–8 months before review and final publication. Anyone involved or interested in the building sector is encouraged to consult the Guidelines. Feedback on their ease of use, suitability etc will be welcomed. Comments or queries should be directed to the CLG. Copies of the guideline documents are available on the CLG website [www.clg.co.nz](http://www.clg.co.nz) ☺

## Changes to competence assessment procedures

**We are moving to a new way of assessing competence, and as with any change there will be a bedding down period. Chief Executive Dr Andrew Cleland talks about the changes and assures our volunteer assessors that their role will become even more vital.**

The start-up of the CPEng register requires all potential registrants to undergo competence assessment. Some applicants will be required simply to present a portfolio of evidence showing that, since their last competence assessment that included an interview, they have performed competently. For those who have never been through a competence assessment, the requirement will be a full assessment including an interview.

Next year we expect to deal with about two thousand applicants for assessment, and in each case we must go through a proper process that is sufficiently robust for the outcomes to withstand appeal, potentially as far as the High Court. Two issues concern us: one is capacity – finding enough assessors to do the work; the other is training and ensuring consistency between assessment panels. Our volunteer assessors have done a wonderful job over the years, taking the responsibility for performing these assessments very seriously, and generally we have maintained consistent standards. Any differences between panels were resolved satisfactorily by moderation meetings involving panels for a number of candidates. With up to 10 times the volume of cases next year, and a need to control costs (previously assessments were subsidised from the general IPENZ subscription), we need a different process for 2003 and beyond.

During 2001/2002 we obtained advice from one of New Zealand's leading competency assessment experts, who travelled to several other countries and

observed their practices. Her recommendation was that we needed to make changes, including the appointment of staff assessors. The rationale was that a panel would then include one person with more training in competence assessment (which is a very specialised field) than it is possible to give the volunteers. The staff assessor would be charged with ensuring consistency, thereby freeing the volunteer to explore thoroughly the technical competence issues specific to the engineering practice of the candidate. This is the system used in Australia by IEAust. We have been trying out the approach, and are satisfied it is a better way forward. Members will have seen our advertisements for candidates to take on the role of staff assessors as part-time employees.

Can we assure the many members who volunteer their time that this change is not an expression of dissatisfaction with what they do. Rather it is the opposite – a move to support and reinforce their activities. We want the interactive assessment to be based on what is termed “professional conversation” between engineers, with a trained person to record the results in a way that meets the requirements of the CPEng Act. We are also seeking to ensure that we do not put excessive demands on our volunteers. Without staff assessors we might have been asking many volunteers to do 10 or even more assessments each year – too many in our view.

Employing staff assessors involves costs, but we are convinced that the advantages experienced by IEAust will also justify these costs here. Obviously we are committed to minimising costs; so where volunteers are prepared to give their time for the benefit of other members, we will pass on the resulting cost savings. ☺

# Movers & Shakers



**Appointed:** Professor Nicholas P Jones FIPENZ, to the position of Head of Civil and Environmental Engineering at the University of Illinois. He completed a BE in civil engineering at the University of Auckland in 1980, followed by an master's degree and then a PhD from the California Institute of Technology.

Dr Jones has taught at Johns Hopkins University since 1986, winning several teaching

awards, and chairing the Department of Civil Engineering for the last two years. In 1997 he won the ASCE's Huber Research Prize. His principal research interests are in structural dynamics and flow-induced vibration, particularly in the context of long-span bridge structures, and he has served as a consultant on bridge projects around the world. Another area of active interest is earthquake engineering.

Dr Jones is extensively involved in ASCE committee work, in areas varying from education to aerodynamics, wind effect to infrastructure policy. Other affiliations include the American Society of Civil Engineers, and the American Association for Wind Engineering. He is the editor of the *Journal of Wind Engineering and Industrial Aerodynamics*.



**Appointed:** Professor Graham Smith is the new head of the School of Engineering at UNITEC, and is a leading expert in the field of gas turbine studies in his homeland of South Africa.

Professor Smith has a PhD from Cambridge University. Formerly a head of department at the University of Natal in Durban, he was heavily involved with South African industry

and consulted on a number of large engineering projects. Projects he has worked on have included building a hydropower irrigation system and designing a robot spraypainter for whiteware manufacturers.

He says he is looking forward to the challenges of his new role. "Engineering skills must be applied imaginatively if industry goals of competitiveness and sustainability are to be achieved, and I'm looking forward to implementing this philosophy with my colleagues." ☺

## New scholarship for Engineering students

Engineering students at The University of Auckland will benefit from a new scholarship. Mainzeal Property and Construction have donated a \$5000 annual scholarship to the Faculty of Engineering, along with an offer of summer employment for the recipient.



Professor Peter Brothers accepts the Mainzeal Scholarship from CEO Neil Ranford

Faculty of Engineering Dean Peter Brothers says the scholarships are aimed at second and third year students who are interested in a career in construction management. The recipient will be chosen on their academic achievement, suitability for future employment by Mainzeal, and interest in a career in construction management.

The employment component of the award allows students to gain experience in the industry, and gives Mainzeal the chance to sample students as potential future employees.

Mainzeal Chief Executive Officer Neil Ranford is a graduate of the Faculty of Engineering, gaining a Bachelor of Engineering (Hons) in 1970. He says he is proud that Mainzeal support his former university. The Faculty of Engineering expects to grant the first scholarship this month.

Professor Brothers says he expects to see more relationships with business develop as the Faculty embarks on a major campaign to attract new scholarships to the Faculty. The aim is to increase the number of scholarships available (currently 46 for almost 2000 students) by a factor of ten. ☺

## Revamped Internet service for exporters

ProjectLink, an online Trade New Zealand service, has been enhanced to make it an even more effective market intelligence tool.

Trade New Zealand Sector Team Manager Peter Smyth says ProjectLink ([www.projectlink.co.nz](http://www.projectlink.co.nz)) gives New Zealand exporters hot leads in the building, construction, engineering and marine industries before their competitors hear about them.

The revamped service, launched on 1 August, offers more flexible searching options. Now a New Zealand exporter can see all the companies working on a specific project, or all the projects out to tender in a specific region. They can also check a company's project history, to identify the movers and shakers in areas of interest to them, and to obtain leads for networking. ProjectLink's market intelligence content has also been boosted with news items and analysis, which can be tailored to a subscriber's needs. ☺



President John Webster presents Gary Paykel with his Honorary Fellowship, awarded in this year's Honours List, at a special function in Auckland recently.

# Nominations for Distinguished Fellow, Honorary Fellow, Fellow

Nominations should be submitted by 30 September

Nominations are called for engineers at the top of the profession to be promoted to the class of Fellow. Fellows are members of IPENZ who have made a substantial contribution to the engineering profession, its practices or IPENZ itself.

Each candidate for Fellowship of IPENZ is expected to have excelled in one of the following areas

- advancement of engineering knowledge
- advancement of engineering practice
- application of engineering or technology in the community
- advancement of technological education
- innovation in creation of engineering works
- innovation in creation of technological products
- leadership in the profession of engineering
- development of the Institution

and have

- contributed to some aspect of the Institution's work, or that of an organisation with similar objectives, for at least one to two years
- a stable work history including roles with significant responsibility, and projects with a significant impact on stakeholders
- been a Member of IPENZ for at least three years

Those who are already Fellows and have achieved a degree of eminence may be nominated for elevation to Distinguished Fellow status.

Honorary Fellowship is available to individuals who are not engineers but are professionally engaged with engineers and have made an outstanding contribution relevant to engineering.

Fellowship nominations should follow the guidelines set out in the Fellow nomination documents, which are available from [www.ipenz.org.nz/ipenz/who\\_we\\_are/honours/fellows.cfm](http://www.ipenz.org.nz/ipenz/who_we_are/honours/fellows.cfm) or by contacting Alan Williams, [awilliams@ipenz.org.nz](mailto:awilliams@ipenz.org.nz)

## Breakthrough export order

West Auckland environmental engineering company, Contra-Shear, has broken into the Chinese sewage treatment market, against stiff competition from European and North American manufacturers.

Four of the company's patented "Suboscreen" rotary wastewater screening units will leave at the end of November for the Nan Shan Wastewater Treatment Plant in the city of Shenzhen, South China. The new Nan Shan Wastewater Treatment plant is due to be commissioned in February next year to serve a major part of the developing infrastructure of Shenzhen.

"China is still a difficult market to enter," says Contra-Shear's general manager, Keith Sargent. "This order is the start of a return on a large investment in time, establishing connections and constant marketing and promotional effort."

China's central government is increasingly concerned with controlling pollution, and Contra-Shear gained the local authority's confidence on the strength of its track record – 25 large installations worldwide, including

installations in most major municipalities in New Zealand.

Contra-Shear's association with the region goes back to the mid-'90s. They appointed a Hong Kong agent, BIS Environmental Engineering, which has expanded into mainland China. Contra-Shear actively promoted the merits of fine-screening technology to municipal authorities and design institutes. They exhibited, with the support of BIS and Trade New Zealand, at Water and Wastewater China 2002 in Guangzhou.

Contra-Shear build fine-screening equipment capable of separating and removing particles as small as 1mm from wastewater. This ensures that coarse inorganic matter does not get through the screening process, making subsequent biological treatment unstable and inefficient.

Contra-Shear's largest installation to date employs six WS200/250 Suboscreens at the Mangere Treatment Plant in Auckland, which has a design flow rate of 16.8 cubic metres a second. The Nan Shan order was for four WS175/175 Suboscreens (rotating drums 1.75 metres in diameter and length) with a design flow capacity of 5.7 cubic metres per second. ☺

## Trade New Zealand Export Awards entries open

Engineering exporters are invited to enter the Trade New Zealand Export Awards for 2002/03. They can enter the Engineering category or the Emerging Exporters category, which has been introduced this year for exporters just breaking into the international arena.

The 2002/03 awards will be won by several exporters in each of 10 categories. These companies will then vie to become the best Exporter of the Year in their sector category – and potentially to become the Trade New Zealand Supreme Exporter of the Year 2002/03.

Last year's Engineering Exporter of the Year was Glidepath, an Auckland based company recognised internationally for its state-of-the-art airport baggage handling systems. Last year's Export Award winners also included A & G Price Ltd and Windsor Engineering Ltd. Opus International Consultants won the Services Exporter of the Year category – another route by which engineering firms can pursue the Supreme Award.

Peter Maire, President of Navman NZ and the 2001/02 Supreme Exporter of the Year, says that winning an Export Award raised awareness of his company at home, and its credibility in international markets. Other benefits are to staff morale, and to the company's profile as an employer – important given the shortage of engineering skills.

Export Award entries open on 19 August and must be submitted by 20 September 2002. See [www.exportawards.co.nz](http://www.exportawards.co.nz) for more information, to download an application or to apply online. ☺

# Board Highlights

Board Highlights 5/6 August 2002 – matters that affect you as members

- Draft rules for Chartered Professional Engineer were reviewed and a process by which they are being released for consultation approved; this involves three releases onto the IPENZ website as the Rules are progressively drafted by the Parliamentary Counsel Office.
- The budget for 2002/2003 was approved with a net predicted deficit of more than \$100,000 due to slow recovery of CPENG start-up costs, and in spite of slight membership growth this year. The start-up of CPENG has involved considerable legal and staff-time costs and costs associated with consultation, which will have to be recovered from CPENG fees.
- A revised subscription system was approved (described elsewhere in this issue of *engineering dimension*).
- Members' responses to calls for feedback on strategic issues were reviewed, and used to help develop strategy on long-term issues. The feedback generally favoured the creation of three registers, the use of the term "Professional member" to describe those using the post-nominal MIPENZ, and creating an Academy of Engineering (and Technology). We will consult with kindred bodies as to whether the Academy should cover the technology area in its title.
- It was agreed to consult Engineering Technologist and Engineering Associate members about the proposed re-naming of their membership classes and the registers associated with them (the results of this consultation are discussed in the President's message).
- Discussions were held with a representative of the Sustainability Committee to ascertain ways to implement the Sustainable Action Plan more effectively.
- The revised Rules of the Institution were reviewed further in preparation for the SGM on 4 December on which date it is intended to do a "repeal and replace". The proposed Rules are organised much more coherently than previously, and include complete Rules for Branches, Technical Interest Groups, Special Interest Groups and Student Chapters to create certainty in the operation of these subsidiary organisational groupings. Collaborating Technical Societies (separately incorporated legal entities) are linked via Memoranda of Understanding rather than trying to classify them with Technical Interest Groups. The Rules also include empowering Rules for creation of Registers, Practice Colleges and Academies.
- Capital expenditure and staffing requirements for the implementation of CPENG were received and approved. There is a need to build up competence assessment capacity, to meet what is still a very uncertain demand pattern.
- New guidelines for the operation of the Engineering Heritage register were approved.
- Other projects were reviewed to ensure that their end-of-year outcomes will be achieved.

## Potion puzzle from the past

Can you identify the subject of this little gem from the archives? The first member to get all three correct answers to us will be rewarded for their imagination with a small prize.

In 1910 an experiment was carried out in Christchurch in an attempt to tackle a source of much anxiety and considerable damage. After four years had passed the engineers responsible found that their efforts had been partially successful. The problem had been checked, but further work was needed.

So the following ingredients were mixed, and the solution applied to a surface.

- Cooper's Sheep Dip, 1 to 10 strength
- Little's Soluble Phenyl
- Montgomery's Exterminator
- Reece's Special Exterminator
- Hunter's Vermifuge
- Avenarius Carbolineum
- Kerosene
- Alum Water
- Terebinth Varnish and Raw Oil

By June 1917 the engineers were able to report a much more successful outcome. However, as the prolonged use of arsenical mixtures was not desirable they sought an alternative remedy and sent specimens of the source of their problem to England for further observation and analysis.

- Questions: (1) What was the problem?  
(2) What caused it?  
(3) In what environment did this problem occur?

Send your answers to: [cauger@ipenz.org.nz](mailto:cauger@ipenz.org.nz) or Tel: 04 474 8948. You must give correct answers to all three questions.



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