

## President's Message



### We all have a part to play

I recently had the pleasure of visiting Napier and Gisborne, and of meeting some of our Members there. In Gisborne I slept through the tsunami-that wasn't, and the next day listened with interest to the consternation of the locals. Many had passed on the warning to others, jumped in their cars and fled to the hills. Or at least they tried to – leaving town there are evidently only three ways to cross the river. Nobody called me, nor did I hear any

sirens or listen to the radio. If I had I would have wondered where the fire was, and on the radio I would have heard only taped music all night. So I suspect that by the time you read this there may be a few changes in the emergency plan.

On the subject of natural disasters, and purely for the sake of making some points about what it means to be a profession, let me present a scenario. Just suppose that, over a number of years, developers cut their costs by always using the cheapest engineering consultants. Would we start to undercut each other and make shortcuts to preserve a margin, or would we hold fast and insist on fair payment for proper levels of design and supervision? Taking this scenario a little further, what would happen if competition on fees alone then became commonplace? I'd guess that best practice would start to become an ideal instead of the norm, and that this view of engineering standards would leave unsupervised young engineers quite untroubled.

Then suppose we had an earthquake (no speculation needed there, actually) and a number of buildings suffered unexpectedly high levels of damage and failure. No speculation is needed here, either, because we'd swiftly see inquiries, the setting up of yet more regulatory bodies, and a very high degree of prescriptive design rules. At that point there'd be little need for engineering judgement, low design fees would be here to stay and we would have ceased to be a profession.

Now think about the sorry mess created by leaky buildings – has the outcome addressed the fundamental problem? Think too, of the eternal tension between midwives and medics (or, more accurately, between some of each group). After a string of high-profile cases, the medics seem to have the high ground. I suspect that there is again more regulation on the way and that midwives will wish that they'd been a bit more rigorous in self-regulating their individual standards, and in being seen to do so. Finally, consider the world-wide fallout for auditors and management consultants that followed the collapse of Enron. Now, could this happen to our own profession? Unquestionably.

Fundamentally, our professional responsibilities require us to maintain individual standards of due care, regardless of what our clients might wish to pay for. But how is this due standard to be set and realised? If we allow clients to set standards, we run the risk of becoming just another occupational group that the government regulates at will. So it is self-evident that, as a self-regulated profession, we need to set and maintain our own standards. Our responsibilities therefore extend not just to our own work, but to the work of others. Unless we are vigilant in setting and preserving acceptable standards for all, standards

can only drift toward the unacceptable. (I knew I could get some thermo in here somewhere – chaos rules, right?)

In 2002 the government had sufficient confidence in our self-regulation that the Chartered Professional Engineers Act allowed us to set and maintain our own standards. Both our IPENZ Rules and the CPEng Act have in place all that we need to require a formal consideration of the practice standards of individual engineers (for more on the process, see the IPENZ website), and National Office has been processing a steady stream of investigations in recent years. However, for reasons of natural justice, these can only be triggered on reasonable grounds.

Remember, too, that IPENZ is primarily a society of professional engineers and not merely a national office. National Office can facilitate the process, but the preservation of professional standards can only be driven by professional engineers – that is, by all of us.

### Peter Jackson

President

## Behind the Boardroom Door

The IPENZ Rules establish the Board as the Institution's governing body. In this issue of *engineering dimension* we go behind the boardroom door to explain how the Board operates, and its relationships with the various entities that make up the IPENZ family and the wider engineering world.

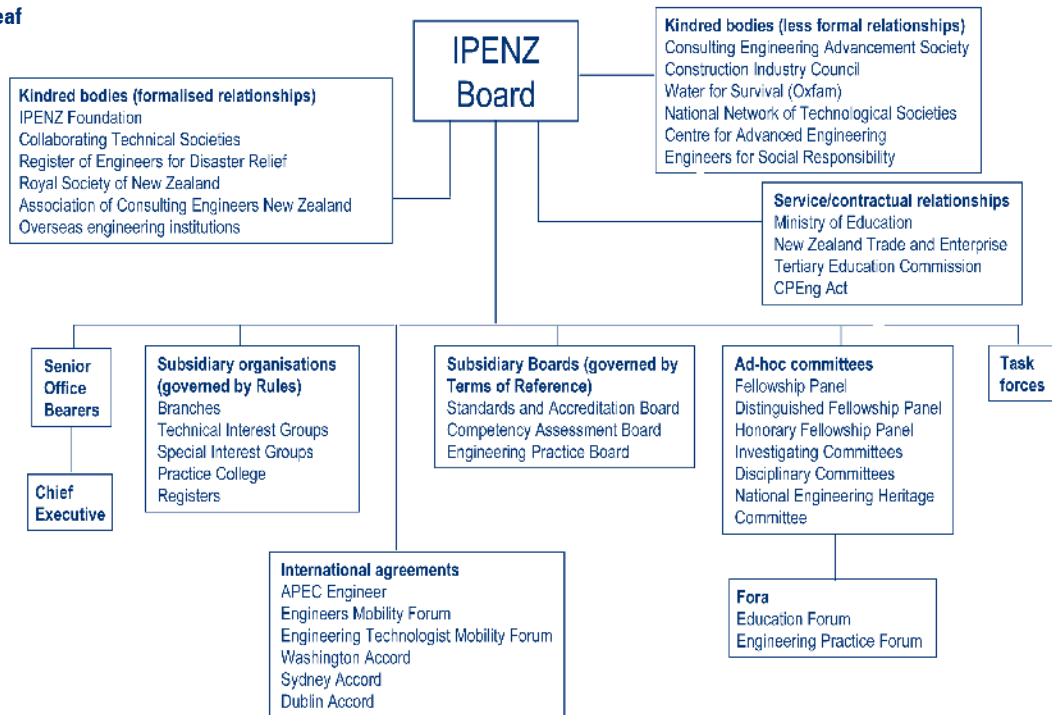
The Board consists of 12 Members, all with voting rights. The Senior Office Bearers (President, Deputy President, Vice-President and Past President) have one-year terms. Each year four of the other eight Board Members stand down and an election is held for three positions, each with a two-year tenure. Retiring Board Members can stand again for up to three consecutive terms. The fourth Board Member is appointed by the Board, and is usually chosen to improve the spread of disciplines, gender, ethnicity, geography and age amongst the Board.

The Chief Executive develops the Board's meeting agenda in conjunction with the President, but any Board Member may request that an item be included. The Chief Executive attends Board meetings and other staff attend if required for specific items. Staff do not have voting rights.

The Board's annual programme includes a number of set activities:

April	new Board commences; review of appointments to subsidiary Boards; forum with representatives of Branches, Technical Interest Groups, Special Interest Groups and Collaborating Technical Societies
May/June	strategic planning
July/August	budget and subscription approval
October	new development projects
December	approval of annual report and accounts; review with subsidiary Boards
February	Fellowship approvals; approval of report to CPEng Council
March	selection of Board-appointed Board Member; AGM

Continued overleaf >>



The **Senior Office Bearers** act as the employer of the Chief Executive and conduct his annual review of performance and remuneration. They collectively hold executive authority to approve matters or vary policy between meetings of the Board, and represent IPENZ in a variety of fora.

The **Chief Executive** has the delegated authority to manage the Institution according to an approved budget. He is authorised to make public statements and represent the position of the Institution.

**Subsidiary organisations** are governed by the IPENZ Rules and any IPENZ Regulations approved by the Board.

Branches are allocated annual budgets from national subscription income, and are delegated authority for spending these budgets in pursuing the objectives of the Branch. Technical Interest Groups (TIGs) and Special Interest Groups (SIGs) form part of the IPENZ legal entity but may have members who are not Members of IPENZ. They do not draw on national subscriptions paid by IPENZ Members, but the Board approves a group subscription sufficient to cover their costs. IPENZ has a single Practice College which is a non-funded entity managed directly by the Board. IPENZ also operates registers, including the New Zealand section of the International Professional Engineers Register and several small registers for specific groups, such as OSH.

**Subsidiary Boards** are delegated authority by the governing Board. They are governed by terms of reference and report to the governing Board through their minutes, and the presence on each subsidiary Board of a governing Board Member. The Standards and Accreditation Board approves education and competence standards and policies, and accreditation recommendations under international agreements. It consults with the tertiary engineering education sector through the Education Forum. The Competence Assessment Board acts as the decision-maker on recommendations from competence assessments leading to registration on a register, or to Membership of a competence-graded Membership class of IPENZ. The Engineering Practice Board develops and approves the engineering practice work programme for the Institution. It consults annually with the Engineering Practice Forum, comprising representatives of TIGs, SIGs and Collaborating Technical Societies (CTSs).

**Ad-hoc committees** include three panels that review cases for Fellowships, Distinguished Fellowships and Honorary Fellowships and make recommendations to the Board. There is a standing National Engineering Heritage Committee that looks after our heritage programme. Both CPEng and IPENZ regimes include Investigating and Disciplinary Committees.

The Board may appoint limited lifetime **task forces** or “task and finish” groups, such as those on fire engineering (still working) and sustainability (completed).

IPENZ has relationships with a broad range of **kindred bodies**. In 2002, the Board created the IPENZ Foundation as a charitable trust. Other than the appointment of the six trustees (as stipulated in the trust deed), IPENZ has no authority over the Foundation but does meet the Foundation’s operational costs.

Collaborating Technical Societies are separately incorporated legal entities, and therefore self-governing. IPENZ maintains close relationships with CTSs because of the complementary nature of their activities. These relationships are managed by collaboration agreements and, in some cases, contracts for administrative services.

IPENZ assists the Register of Engineers for Disaster Relief (RedR) and Water for Survival (now Oxfam) by collecting donations. The Institution has memoranda of understanding (MoU) with RedR, the Association of Consulting Engineers New Zealand (ACENZ), and the Royal Society of New Zealand (RSNZ). IPENZ has less formal relationships with the Consulting Engineering Advancement Society (through ACENZ), Engineers for Social Responsibility and the Centre for Advanced Engineering, and is a member of the Construction Industry Council.

Outside New Zealand, IPENZ has a variety of MoU with overseas engineering institutions; the most important is probably that with Engineers Australia.

IPENZ has major **service/contractual relationships** with New Zealand Trade and Enterprise for Futureintech and the Tertiary Education Commission via Massey University for work on professional development in the ICT sector. IPENZ also has a number of contracts with the Ministry of Education, and small administration and/or accounting contracts, with organisations such as the Cadastral Surveyors Licensing Board.

The CPEng Act 2002 established IPENZ as the Registration Authority to assess and then register engineers as CPEng. IPENZ’s responsibilities include reporting to the CPEng Council.

To mutually recognise accreditation standards through **international agreements**, IPENZ is a signatory to the Washington Accord (four-year degrees) and the Sydney Accord (three-year degrees), and is moving towards becoming a signatory to the Dublin Accord (two-year diplomas). IPENZ is a full member of the APEC Engineer agreement and Engineers Mobility Forum agreement for mutual recognition of professional engineers and has signed the MoU for the Engineering Technologist Mobility Forum.

## Registered Technical Engineer and Certified Engineering Technician

As part of our commitment to becoming more representative of and relevant to engineering technologists and technicians, IPENZ is developing new current competence registers for Technical Members (TIPENZ) and Associate Members (AIPENZ), which we plan to launch in 2007.

IPENZ has support for the initiative from several industry sectors which see the need to develop clear career pathways, including recognised qualifications and quality marks, to encourage people into their industry at both the engineering technician and engineering technologist level.

Training providers and the Department of Building and Housing also support initiatives promoting careers in ways that link to qualifications and quality marks. The proposal has possible synergies with developments around the Licensed Building Practitioner regime, where provision is likely to be made for licensing engineering technicians or technologists for category one buildings.

Key aspects of the register proposal are:

- IPENZ Membership will not be required – the registers will be open to any person who applies and meets the relevant competence standard.
- The registers will be based on current competence and require registrants to demonstrate their competence on a regular (normally five-yearly) basis to remain on the register.
- The registers will be supported by certification trademarks through the Intellectual Property Office of New Zealand.
- Registration decisions will be independent and authoritative, as IPENZ is recognised as a regulator under the CPEng Act and is independent of any particular industry association.
- The regulations and administrative systems to support the registers will be based on those that IPENZ currently has in place for Chartered Professional Engineers (CPEng).
- The registers will be underpinned by a complaints procedure administered by IPENZ.

It is proposed that the two registers are known as Registered Technical Engineer and Certified Engineering Technician.

A survey of Associate and Technical Members in 2002 indicated majority support

for the term Registered Technical Engineer for the TIPENZ register. While the title Registered Engineering Technologist has been considered, this may be in violation of Section 77 of the CPEng Act because it could cause someone to believe the person was a “registered engineer”. Registered Technical Engineer is also more distinct from the Registered Engineering Associate quality mark.

The survey indicated widespread support for using the term “certified” at AIPENZ level. While Certified Associate Engineer was the preferred title amongst survey respondents, use of the term “engineer” is considered more appropriate for the TIPENZ register, which is underpinned by a degree qualification. Certified Engineering Technician is therefore the proposed title.

Consideration has also been given to the postnominals that will apply. Care needs to be taken to ensure that the postnominals are sufficiently unique to avoid confusion with other quality marks. Options that have been considered for each register are as follows:

Register	Possible postnominals
Registered Technical Engineer	RegTechEng, RTEng, RegTE
Certified Engineering Technician	CertEngTech, CETech, CertET

Considering the options, RegTechEng and CertEngTech provide clear links to the registers, but could be considered too long and cumbersome. RTEng and CETech follow the convention adopted for Chartered Professional Engineer (CPEng) and emphasise the “engineer” and “technician” elements of the title. RegTE and CertET are consistent with the convention adopted for the International Professional Engineers Register (IntPE) and stress the “registered” and “certified” element, thereby avoiding the possible confusion with “chartered” that could emerge with CETech. They are also considered to be the easiest to pronounce and are the favoured options at this stage.

Final decisions are yet to be made and we would welcome Members’ opinions. If you have a view on the proposed titles or postnominals for the two registers, or would like to find out more, please contact Brett Williams, Director – Learning and Assessment, email [bwilliams@ipenz.org.nz](mailto:bwilliams@ipenz.org.nz) or phone 04 474 8936.



### It's not too late

If you've only just discovered the New Zealand Engineering Excellence Awards and you really want to enter, don't despair – there's still time.

Although expressions of interest closed on 1 June 2006, you will still be in the running if you send in your entry and supporting material by 5.00pm on Monday 3 July.

The awards will be presented on 22 November in Wellington at a prestigious black tie dinner to be held at TE PAPA. So put the date in your diary and come and celebrate New Zealand's engineering excellence. Who knows, you could be there as one of the finalists!

For more information about the awards and to download an entry form visit [www.nzeeawards.org.nz](http://www.nzeeawards.org.nz)

## Spread the Word

The heart of IPENZ is our Members. IPENZ has survived nearly 100 years due to the generosity and support of Members like you.

As a Member of the Institution, you are one of the best advocates for IPENZ. This month we launch our new *Guide to Professional Membership* brochure. A copy of the brochure is enclosed with this issue of *engineering dimension*.

Please pass this brochure on to another engineer who is not currently a Member of IPENZ, so they too can learn about their professional body and enjoy the many benefits of belonging to IPENZ.

If you require additional leaflets, please contact us on 04 473 9444 or email us at [membership@ipenz.org.nz](mailto:membership@ipenz.org.nz)

### Overcoming limitations

What do a new sports energy bar, a skateboard park and a racing motorcycle have in common? One class at Rutherford High School in Auckland can tell you the answer is Futureintech... or more specifically our generous Futureintech Ambassadors.

When Molly Nepe was looking for inspiration for her class she turned to Futureintech Facilitator Angela Hart. Molly has plenty of students who love learning about technology and engineering, and being a textiles and fabrics specialist didn't stop her from offering them more.

After discussing what they wanted to get out of the classes, it was decided to let each student choose their own personal project within their field of interest. Once they received teacher approval, Angela found students mentors from the engineering sector.

The solution has proved highly successful and has been embraced with enthusiasm by both students and mentors. And one look at the projects they are doing tells you why: Isthmus is collaborating on the design of a skateboard park; Tasti Products is assisting in the creation of a new sports energy bar; and senior FSAE mechanical engineering students are overseeing the restoration of motorcycles belonging to one Rutherford student's father, along with a few improvements.

The concept is an innovative approach to education which is ideal for many schools – small and large. If you or your staff want to be involved in an exciting initiative such as this – as a Futureintech Ambassador or in any other way – talk to one of our Futureintech Facilitators. Contact details can be found at [www.futureintech.co.nz/facilitators.cfm](http://www.futureintech.co.nz/facilitators.cfm)

### Transpower Neighbourhood Engineers Awards

It's the time of year to start thinking about possible projects for the Transpower Neighbourhood Engineers Awards. This year there is a push for more entries from rural schools. The potential in rural schools is no better exemplified than by the experience of Dr Sarah Dodd, a scientist recently profiled by Futureintech. Her seventh form year at Ruawai School in Northland comprised two students, both of whom have achieved doctorates in the biological sciences and are extremely valuable members of the New Zealand science community.

The Transpower Neighbourhood Engineers Awards are open to all primary and secondary schools in New Zealand. They aim to create a greater awareness of the engineering profession and meet the objectives of technology in the New Zealand curriculum. Teachers, students and engineers work together to respond to an identified need or opportunity in their school or local community, and submit a report of the technology unit as an entry for the awards.



Neighbourhood engineering at Robertson Road School

The awards are divided into three categories: Years 1–4, 5–8 and 9–13. There are substantial cash prizes, including \$2,000 for category winners. Entries close on 27 October 2006. For more details, contact Susan Weekes on phone 04 473 2021 or email [neawards@ipenz.org.nz](mailto:neawards@ipenz.org.nz)

### A new team at IPENZ

The work in schools supported by IPENZ has grown so much in recent months that a new team has been formed to help ensure its success.

Headed by Angela Christie, the new "Schools" team includes staff who are working on our Futureintech and Techlink projects, funded by New Zealand Trade and Enterprise and the Ministry of Education respectively. The Schools team also looks after the Transpower Neighbourhood Engineers Awards and the heritage programme.

Futureintech promotes careers in technology, engineering and science in schools. Our six full-time Facilitators, in Auckland, central North Island, Wellington, Canterbury and Otago, engage industry support and work with teachers, careers advisors, students and their caregivers. They are supported by a Wellington-based Writer/Researcher and Projects Officer. A new Facilitator position is planned for Auckland later this year.

Techlink promotes technology education online by providing case studies for teachers, educationalists and other interested parties. The project, led by Coordinator Glynn McGregor, has received a boost in the past few weeks with the addition of two writers and a communications officer. Much of Techlink's recent work has been on case studies from the GIF Technology Education Beacon Practice projects which began in 2005.

## Keeping in Touch with Graduate Members

As part of the initiatives underway to address Membership growth and retention, over the last few months IPENZ has been contacting Graduate Members. The aim is to review their progress with competence development record keeping and address any issues they may have.

It is important that Graduate Members keep their competence development records up to date, whether they use the online function available in the Member Area of the IPENZ website or keep their own records. Often it is difficult to gather information just before applying for MIPENZ and/or CPENG. Several Graduate Members have expressed frustration about not being able to contact past

employers or managers to get their records verified. This can result in delays and makes putting together a portfolio of evidence more difficult.

Marketing Assistant Nick Maitland, who has been manning the phones, has another great tip for Graduate Members. "If you tick a competence element box you must state how that element has been addressed in your work description. Too often boxes are ticked without explanation. The assessors don't require enormous amounts of description, but an assessor must be able to see the link between the work activity and the competence element being developed or demonstrated."

## Engineering Public Policy

In providing engineering leadership on national and community issues, IPENZ performs a key public policy role on behalf of the engineering profession. Our public policy team actively influences government to take new actions, amend proposed actions and change existing practices to achieve a better New Zealand and ensure a high quality engineering practice environment.

Our public policy processes aim to keep Members up-to-date on governmental decision-making, encourage informed debate on engineering issues, and present a credible engineering view to government and the general public. Two current policy projects are the development of an online energy resource and our national energy strategy, *Engineering a National Energy Strategy*, which will be launched this month.

These projects, and our mandate in general, can only be fulfilled by the active participation of the Membership and a process of stringent peer review. Members are frequently invited to put forward opinions and detailed comments on policy topics, which are then collated and put into a policy framework. Members should be aware that while all contributions are valued and helpful, they are often incorporated in ways that Members might not immediately recognise.

Members often put forward relevant but highly technical information which needs to be translated into recommendations that are suitable for inclusion in a policy document. For example, engineers may point out the large heat losses from buildings due to a lack of insulation, and the consequent need to modify consumer behaviour. Two possible policy actions to address this could be introducing a multi-star rating system as an education measure, or requiring the publication of energy costs when buildings are for sale.

Once a draft framework is developed it is subject to peer review to ensure that the views put forward represent those held by the majority of our Membership. Members often put forward valid arguments against proposed text which is then amended as appropriate.

During the development of the national energy strategy framework, we received a significant amount of information that was informative but too specific, contentious, or unproven to be included in the main policy document. As much of this information was valuable, it was decided to develop an online energy resource which would allow IPENZ Members to make research and critiques available to the general public in an easily accessible form. Members are invited to submit their own original work, work whose authors have granted permission for it to be reproduced, or links to other websites and portals.

If you would like to contribute to the online energy resource, please email your submission to [policy@ipenz.org.nz](mailto:policy@ipenz.org.nz)

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## May Board Highlights

The Board met on 28 and 29 May with the following activities and outcomes:

- Membership statistics indicated a net gain of 240 Members for the financial year to late May, compared to 145 new Members at the same time last year; this is the most pleasing recruitment year for some time.
- The appointment of a seventh Futureintech Facilitator, bringing the number in the Auckland region to three, was approved, funded from savings to date on the existing contract.
- Amended guidelines for evaluating nominations for Fellowship were approved and will apply from the next round. The main change is that applications that do not succeed may be held as current applications for up to five years.
- It was agreed to prepare small changes to the Rules of IPENZ to permit more flexibility in the governing Board's composition. These changes will be presented to a SGM in October 2006 for approval.
- The Board noted progress on a number of projects including the investigation of how to improve Student Membership, development of competence registers for engineering technologists and technicians, and the updating of IPENZ's visual identity.
- The Chief Executive reported that a new work programme with the Department of Building and Housing to address the way in which CPEng fits into the Building Consent Authority processes is expected to commence soon.

The Board also spent a significant amount of time considering feedback from the Branch and Technical Group Forum, and the views of staff in relation to the strategic plan and future work programmes. It was agreed that the strategic plan is sound, but there would be value in improving our measurement of performance. Possible new work streams for the next two to three years were reviewed and prioritised. High priority was assigned to:

- defining and meeting the needs of young engineers
- working with academic staff to ensure they participate fully in the wider professional activities of IPENZ
- boosting activity and knowledge of national programmes in Branches
- considering how competence assessments could be improved for those not practising engineering, but using an engineering approach to professional activities

## Member Services

### Engineering Practice Support

IPENZ encourages Members to follow recognised professional practices in their day-to-day engineering activities. To assist Members in doing so IPENZ has developed a series of *Practice Notes* as a source of endorsed advice to engineers on practice-related issues. *Practice Notes* currently available include:

Note 1 – Producer Statements

Note 2 – Peer Review

Note 3 – Media Tips

Note 4 – Safety and Engineers

Note 5 – Sustainability and Engineers

Note 6 – Developing and Maintaining Client Relationships

To discuss the use of these documents contact our Engineering Practice Manager Andrew Clark on 04 474 8986 or email [practicemanager@ipenz.org.nz](mailto:practicemanager@ipenz.org.nz)

### Informatory Notes

IPENZ seeks to contribute on matters of national interest. One method of doing so is via *Informatory Notes* which give a learned view on important issues independently of any commercial interest. Such notes are not consensus papers of the Institution's Membership but rather an exploration of the issues and possible outcomes. There are 12 *Informatory Notes* currently available on a range of subjects including: economic growth; education; sustainability; climate change; innovation, research and development; and resource management. *Informatory Notes* are freely available from [www.ipenz.org.nz/ipenz/media\\_comm/informnotes.cfm](http://www.ipenz.org.nz/ipenz/media_comm/informnotes.cfm)

### Graduate Mentoring Service

Having a mentor has huge benefits for graduates as it helps them develop professional judgement under guidance.

IPENZ Endorsed Employers organise the mentoring process for their own graduates, but Members not employed by an Endorsed Employer can also participate. Members interested in becoming mentors or wishing to be mentored can contact Competence Development Manager Jeanette van Barneveld to register their interest. IPENZ will then match graduates with a mentor. A mentor will have completed their own professional competence and have up-to-date knowledge of requirements and assessment process.

IPENZ is also investigating extending the mentoring service to cater for more experienced engineers.

For further information or to register please contact Competence Development Manager Jeanette van Barneveld by emailing [jvanbarneveld@ipenz.org.nz](mailto:jvanbarneveld@ipenz.org.nz) or phoning 04 474 8984.

**Charles Emery (Pete) Taylor MIPENZ**

17 October 1914 – 9 April 2006

Pete Taylor, businessman and one-time Honorary Consul for Sweden, died on 9 April 2006 aged 91.

Pete grew up in Palmerston North where his father was an engineer. He completed an electrical engineering degree at the University of Canterbury then took a job with Swedish company ASEA Electric. He spent most of his working life with the company, eventually becoming Australasian Managing Director.

In his twenties, Pete worked his way to Sweden as a ship's greaser, and spent a year with ASEA in that country. He became enamoured of Sweden and learned the language before war intervened and he returned to New Zealand to work

for ASEA in Wellington. He also spent several years working for the company in Melbourne. Big projects Pete was involved with included the Cook Strait electricity cable and Australia's Snowy River scheme.

Pete acted as Honorary Consul for Sweden in Wellington from 1961 to 1965 and was twice honoured with the equivalent of knighthoods by the King of Sweden for his contribution to the relationship between the two countries. He was a founder of the Sweden-New Zealand Association and then its President.

Pete was elected Wellington President of the Chamber of Commerce and he also headed the local Employers and Manufacturers Association for a time. Pete headed ASEA till he was about 70, and then became Director of the New Zealand Standards Association, now Standards New Zealand.

Thanks to The Dominion Post

**Advance your Career by Publishing**

IPENZ encourages Members to promote their engineering knowledge and achievements by entering awards and presenting at the IPENZ Convention. Why not also disseminate your project, solutions or research to an even wider audience by publishing a technical paper?

Publishing can reap a range of rewards such as:

- validating your project and solutions by peer review
- marketing your skills – raising your profile and credibility
- providing evidence of professional development
- alerting employers to your individual efforts
- adding to your portfolio and CV

Not only is publishing "good press" for individuals, but it also reflects well on employers. Publishing is perhaps the most cost-effective method of marketing. Having employees publish technical papers is far cheaper than advertising, and gains technical knowledge kudos for the whole organisation.

Publishing is also good for the profession. Like other professional institutions, IPENZ views publishing as an important aspect of our role as a learned society. Publishing good quality, peer-reviewed technical papers raises the standing of IPENZ and our Members.

Our publication vehicle is web-based *engineering treNz* (Transactions of Engineers New Zealand). It is freely available and easily searchable with papers widely indexed by web search engines. By publishing your paper in *engineering treNz*

you will make it visible and accessible for potential readers world-wide as well as making it directly available to our 9,000 Members.

Papers published in *engineering treNz* are peer reviewed and edited by experts in their fields, certifying the integrity of your paper and our publication. Our rigorous publishing process assures editorial and production excellence.

Our reviewing procedures are fair and open. The aim is to help authors develop and improve their work. We respond promptly to our authors, with dedicated support staff for each publication providing a point of contact during the refereeing and production processes.

*engineering treNz* accepts two types of papers for publication: "Notes" and "Projects". Notes are similar to conventional academic papers and record advances in engineering knowledge, while Projects record lessons learnt in the course of major projects or developments. The format is typical of professional publications and our website provides a downloadable template as a guide.

IPENZ technical papers are a valuable resource for practising engineers. To search our current library visit [www.ipenz.org.nz/ipenz/publications/treNz.cfm](http://www.ipenz.org.nz/ipenz/publications/treNz.cfm) Several new papers have been added and three papers are currently in production so keep an eye on the *engineering treNz* website for new additions in the near future.

Further information and author guidelines are available at [www.ipenz.org.nz/ipenz/publications/treNz.cfm](http://www.ipenz.org.nz/ipenz/publications/treNz.cfm) Alternatively contact *engineering treNz* editor Lindsay Robertson at [lindsay@tech-vantage.com](mailto:lindsay@tech-vantage.com) or on 021 240 6863.

**Project Presto Places in Taiwan**



Former Burnside High School student Denis Chen won second place in the chemistry category at the Taiwan International Science Fair held in February. Denis's airfare was paid for by the IPENZ 4ingenuity Award which he won at last December's Genesis Energy "Realise the Dream" event.

Denis's research, "Project Presto", was on a complex rapid charging method for secondary cells called reflex charging. Project Presto sought to optimise reflex charging by examining the response of Ni-MH cells to various charging frequencies, and intelligently controlling a chemical system through an external circuit.

Denis says he developed an "obsessive" passion for electronic and computer technologies at a young age. He is now pursuing his passion by studying engineering at the University of Canterbury.

Students from 11 countries attended the fair. The chief judge thought that New Zealand representatives stood out among the competitors with their independent research abilities and their world-renowned "kiwi ingenuity".



**Neville Jordan DistFIPENZ** will become President of the Royal Society of New Zealand in mid-June – only the second engineer to be President of the society in its 139-year history.

After graduating in electrical engineering from the University of Canterbury, Neville worked in the civil aviation industry and for IBM. In 1976 he founded telecommunications company MAS Technology Ltd and in 1997 he led its successful float on the NASDAQ stock exchange.

Neville has served on the boards of AgResearch, the Foundation for Research, Science and Technology, and the Prime Minister's Growth and Innovation Advisory Board. He was awarded the IEE Kirby medal for "outstanding eminence and distinction in advanced technology". He received the Governor General of New Zealand Supreme Award for Exporting in 1997 and was inducted into the New Zealand Hi-Tech Hall of Fame in 2004. In 1999 he was made a Companion of the New Zealand Order of Merit in recognition of his substantial contribution to international telecommunications and exports. Neville is now a venture capital investor and is the founder or chairman of several advanced technology and science-based companies.

An in-depth profile of Neville features in the May/June issue of *e.nz magazine*.



**Clive Tilby MIPENZ** was appointed by the Minister of Transport in April to chair an independent advisory group looking into costs in the road development and maintenance sector. The project involves consulting with public and private stakeholders in industry and the group is required to present its report to the Minister at the end of July.

Clive graduated as a civil engineer from the University of Canterbury in 1970. He worked for the Ministry of Works on major roading and bridging projects before moving to the Tongariro Power Development and then project management for the South Rangitikei Railway Bridge. In the 1980s Clive worked for Brian Perry Ltd on a range of high risk civil engineering projects before being appointed Regional Manager for Fletcher Development and Construction in Wellington.

Clive then joined international construction firm Bilfinger+ Berger Bauaktiengesellschaft, becoming Head of Operations in Indonesia. He was later appointed Executive General Manager of Downer Construction NZ and Pacific. Since 2003, Clive has been consulting to the infrastructure industry in a wide range of roles.



**Jon Williams MIPENZ**, CPEng is the new General Manager of Beca Buildings' building services team. He will focus on providing support for the technical integration of best practice, with particular emphasis on covering Beca's New Zealand, Singapore and United Kingdom offices.

Jon has over 20 years' experience in the industry and was Technical Director for Beca's Auckland building services team for seven years. He specialises in vertical transportation and has recently undertaken study tours of a number of elevator and escalator suppliers and key installations in Europe and Asia. Jon has lived and worked in the United Kingdom and Africa and has led a number of international projects while at Beca.



**Mark Spencer MIPENZ**, CPEng has been appointed as the General Manager of Beca Buildings' structures team. He will focus on technical integration, and furthering the collaborative work Beca Buildings' international offices undertake for projects in the Middle East.

Mark has been at Beca for over 20 years. He has led and managed Beca's Auckland commercial structures team and was most recently Technical Director for Structural Engineering. He specialises in the design management of large commercial projects and the design of deep basements and associated ground retention systems. A well-known example is his technical leadership of the Macau Tower project in China. Mark has also been very active in technical support for Beca's Australian and Singapore offices.

## Member Services

### IPENZ Professional Development Short Courses

Our Professional Development Programme is specifically designed to contribute to developing and maintaining Members' competencies as professional engineers, engineering technologists and engineering technicians.

Course content is engineering-orientated and learning outcomes are linked to relevant elements of the Competence Standard for assessment. Short Courses are run in smaller centres which helps minimise travel and accommodation costs and IPENZ Members receive a discount. Full details are available at [www.ipenz.org.nz/ipenz/nzecal/ks.cfm](http://www.ipenz.org.nz/ipenz/nzecal/ks.cfm) by emailing [CPD@ipenz.org.nz](mailto:CPD@ipenz.org.nz) or by phoning Josie Nolan on 04 474 8982.

### Energy Library

Members can access specialist technical material at the Energy Library.

The Energy Library is the main access point for technical and scientific information in the New Zealand energy sector and related industries.

There is also considerable overlap with more general information needs, for example, IPENZ stores our technical and heritage collections with the Energy Library.

IPENZ has negotiated a membership deal with the Energy Library which gives Members:

- a reduced individual membership fee (\$85 instead of the standard \$110)

- access to the Energy Library database of resources

- borrowing and usage rights for a substantial collection of books, standards and journals

- research services

- a monthly email alert service for newly acquired and free information resources

For further information about the Energy Library visit [www.energylibrary.org.nz](http://www.energylibrary.org.nz)

### IPENZ Technical Interest Groups

Members can also join IPENZ Technical Interest Groups which provide a programme of activities and services associated with a particular engineering specialty or discipline.

The Group informs Members of national and international developments and issues, contributes to knowledge development, supports the identification of good engineering practice, prepares informed comment on public policy issues and creates a national network amongst Members with similar technical interests by regular communication.

For more information on IPENZ Technical Interest Groups visit [www.ipenz.org.nz/ipenz/who\\_we\\_are/organisation/technical\\_groups.cfm](http://www.ipenz.org.nz/ipenz/who_we_are/organisation/technical_groups.cfm) or phone Saltanat Cole on 04 474 8937.

## IPENZ Professional Development Short Courses

June – August 2006

### IPENZ Mentoring Foundation Workshop

This one-day workshop is designed to develop mentoring and coaching skills and make mentors more effective in their interactions with mentees, team and project members, and clients.

Tauranga 4 July

### Avoiding Ethical Dilemmas

This one-day course introduces participants to the ethical values that underpin their profession and the obligations that flow from them.

Queenstown 16 June

Taupo 27 June

Auckland 29 June

Christchurch 18 July

Nelson 20 July

### Negotiation Skills for Technical Professionals

This interactive, practical one-day workshop enables participants to identify their current strengths and build skills to improve their ability to negotiate successfully. These skills are applicable to technical, contract and conflict negotiations that many engineers are involved in.

Auckland 20 June

Taupo 18 July

### Leadership and Management Essentials

This one-day course covers the essentials for engineers and business managers to enhance their leadership and management practices. Participants will learn how to effectively handle their dual leader/manager role.

Albany 4 July

### Incorporating Climate Change Predictions into Engineering Design

IPENZ, NIWA, Ministry for the Environment and Opus are offering this one-day seminar for engineers working in the fields of river, coastal, stormwater

and water supply engineering, as they are increasingly being called upon to incorporate climate change predictions into their investigation, design planning and asset management.

Wellington 28 July

Queenstown 7 August

Christchurch 8 August

Taupo 14 August

Auckland 15 August

Albany 16 August

### Contract Management NEW

This course introduces participants to the principles of establishing and managing contractual relationships in a project environment, to ensure successful delivery of their project.

Wellington 14 July

Auckland 28 July

Cost:

One day \$495 incl GST – IPENZ Members

\$540 incl GST – non-members

Two days \$945 incl GST – IPENZ Members

\$1,035 incl GST – non-members

### Working Smarter to Improve Productivity – Lean Thinking NEW

Businesses are constantly looking for the formula to generate success and increase their bottom line. The “lean” manufacturing process, which has been around for over 50 years, continues to deliver outstanding results. This half-day seminar will introduce lean thinking and present case studies of New Zealand companies already using it.

Auckland 22 June

Wellington 23 June

Cost:

Half day \$270 incl GST – IPENZ Members

\$315 incl GST – non-members

### Short Courses in Project Management NEW

IPENZ is collaborating with ProjectPlus to offer a range of one- and two-day short courses for IPENZ Members which are suitable for experienced project managers and engineers new to project management.

### Essential Skills for Managing Projects

Wellington 15–16 June

Auckland 20–21 June

### Project Management Overview

Wellington 4 July

Auckland 17 July

### Project Risk Management

Auckland 19 July

Wellington 26 July

### Project Management Procurement

Auckland 22 June

### Project Planning and Control

Auckland 18 July

Wellington 25 July

### Project Cost Management

Auckland 20 July

Wellington 27 July

Cost:

One day \$618.75 incl GST – IPENZ Members

Two days \$1,237.50 incl GST – IPENZ Members

Non-members must register directly with ProjectPlus.

Registrations close one week before the start of the course or seminar in each location. Full details are available at [www.ipenz.org.nz/ipenz/nzecal/ks.cfm](http://www.ipenz.org.nz/ipenz/nzecal/ks.cfm) or by emailing [CPD@ipenz.org.nz](mailto:CPD@ipenz.org.nz) or telephoning Josie Nolan on 04 474 8982.



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