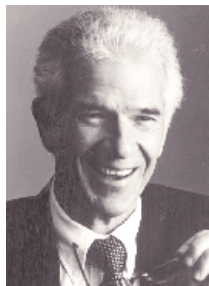


President's Message



The Year in Review

In April 2004 I wrote my first column as President entitled "The Year Ahead" and perhaps naively, listed the initiatives I planned to implement during my year in office. But as I reflect on the year, I am proud to say we have accomplished all of them and all, I believe, have added value to our profession.

Now I sit here writing my final column thinking about the immense satisfaction I have gained from the experience. To have served as your President has been an honour; to have met with so many Members and discussed with them the future of the Institution has been a privilege. At times it has been demanding, particularly the road show travel whilst managing a full-time job, but absolutely worthwhile. I have no hesitation in recommending that you seriously consider giving service to the Institution and the general advance of the profession through IPENZ.

My presidential theme "Engineers as Leaders" was intended to make each Member think about his or her contribution to business, the community, and to raising our profile as a profession. We tend to forget that each of us is a leader in our own right, and as a profession, we are typically self-effacing regarding the contributions we make. However, things are changing. The message has got through to government and industry that engineers *can* make a contribution. Increasingly we are being asked for advice about the direction of our national economy, and engineers are being sought out for leadership and governance roles.

The Institution has also changed over the past twelve months. We are now implementing a more diverse range of activities all of which are designed to raise the profile of the profession, and to support the professional development of our Members – the two reasons you indicated were most important to your Membership. At the same time we have built up our National Office staff without raising subscription income. Today, subscriptions form less than 40% of our total income compared with 70% a few years ago, and we have evolved into a larger and more robust organisation capable of undertaking a wider range of policy and professional development programmes.

While there have been some outstanding contributions to IPENZ this year, those made by the Competency Assessment Board and the panel of volunteer assessors in processing CPEng applications have been simply superlative. At the end of 2004, 1950 applications had been received, 1818 had been approved and there were 108 applications still being processed. The response of Members to CPEng registration has been overwhelming and the implementation of CPEng as a quality mark of value to both the community and to engineers is a truly outstanding piece of work.

Looking ahead, 2005 promises to be another frenetic year. On 11 March we move to our new premises at 158 The Terrace to provide our National Office staff with more space and better working conditions. On Wednesday 16 March we open "Convention 2005 – Engineers as Leaders" with our twice-yearly liaison meeting with the Engineers Australia contingent, our March Board meeting, and the President's Reception.

continued overleaf >>>

Charting IPENZ's Direction: have your say

Members are invited to express their views on the future direction of IPENZ at the Board's Planning Forum on Saturday 9 April in Wellington.

The Forum is the IPENZ Board's main formal consultation mechanism. It is held annually as part of its planning process, and representatives of every Branch, Technical Interest Group, Special Interest Group and Collaborating Technical Society are invited.

Briefing notes will be sent to relevant Chairpersons in early March for distribution and discussion amongst Branches or Groups before the Forum. The briefing notes will also be loaded in the Member Area of the website so that any Member can access them, and comment directly to the Chief Executive (acleland@ipenz.org.nz). All comments received will be conveyed to the Board.

It is an important time for IPENZ planning-wise as our circumstances have changed significantly over the last few years. In 2000 we spent a little over \$2m and employed under 20 staff. Subscriptions were about 70% of income. In 2005 we expect to spend \$5.6m, and subscriptions (which have gone up less than the rate of inflation) will be less than 40% of our total income. The staff numbers have grown to 45, although many of these are dedicated to contracts such as Futureintech. However the Board is not anticipating that the current rate of growth will continue. It is envisaged that over the next five years a more likely scenario is that IPENZ will settle back to a turnover of around \$5m per year, or perhaps grow towards a \$7m turnover (obviously, to provide more services for Members requires more money).

Key questions for the Forum include:

- Unifying IPENZ stakeholders to achieve the organisation's strategic goals – how can Members and other stakeholders contribute effectively to make a better national professional body representing the engineering profession as a whole?
- The IPENZ Membership base – should priority be given to providing improved services for the relatively small numbers of Technical and Associate Members or to provide more service for Professional Members? What are the potential benefits to Members and the wider community?
- Renewal of the profession – what role can Members and other stakeholders take in raising the profile of the profession and promoting careers in engineering so the nation has sufficient bright and able people entering the profession?
- Professional development – what are the opportunities for multi-party arrangements with IPENZ National Office and Technical Interest Groups, Collaborating Technical Societies or kindred bodies, to ensure that Members and other engineers have access to a comprehensive set of professional development opportunities.
- NZ Engineering Excellence Awards (see article "New Zealand Engineering Excellence Awards 2005"). Potentially they can make a major contribution to raising the profile of the engineering profession. How can we make the most of this opportunity to promote engineering?

The present strategic plan on which the programmes run by National Office are based is available on our website at <http://www.ipenz.org.nz/ipenz/who%5Fwe%5Fare/stratplan/>

IPENZ is its Members – have your say on its future direction! 

The following day, Thursday 17 March, we formally open Convention 2005 with an interesting and varied programme highlighting the challenges and opportunities for "Engineers as Leaders" in New Zealand business and society. Some of the professional development initiatives we have in progress to equip our Membership for leadership roles will also be presented. One of the highlights of Convention 2005 is "The Fellows' and Achievers' Dinner" – a black tie event recognising outstanding engineering achievement from amongst our Membership.

An opening event is planned for the 8 April following our move to 158 The Terrace, and on the 9 April we will hold our annual Planning Forum inviting Branch, TIG, SIG and CTS representatives to contribute to the Board's strategic plan for the coming year. Planning is also underway for the inaugural New Zealand Engineering Excellence Awards to be held in November. So as you can see, the Institution is alive and well. In fact, our biggest problem is deciding where to focus our limited resources to maximise value for our Members.

As I said at the outset, it has been a pleasure working with the Board, Membership and staff to achieve our objectives. As Past President I plan to continue my work around the "Engineers as Leaders" theme to complete the programme we've planned and to maximise the benefit to our Members. As we see more engineers rise to leadership positions in engineering and business we will know that we have truly made a difference.

Ian Parton
President

Engineers Appointed to New Land Transport New Zealand Board



New LTNZ board member Gerry Coates FIPENZ (right), with senior traffic engineer Colin Goble AIPENZ, at the LTNZ launch function.

Two IPENZ Members have been appointed to the new Land Transport New Zealand Board: David Stubbs FIPENZ, and Gerry Coates FIPENZ (IPENZ immediate past president).

Mr Stubbs of Whitianga is the former Director of Works and Planning for Auckland City Council and a former chair of Transfund's board. He is also chair of the Transit New Zealand Board.

Mr Coates of Wellington is a consultant and forensic engineer, with a particular interest in sustainability and transport issues. His

presidential task committee presented its report "Sustainability – A Task for Engineers" at the 2004 IPENZ Convention in Christchurch.

The new LTNZ board is chaired by Dr Jan Wright, an independent policy and economic consultant, also on the boards of ACC and Transit, and formerly of the Energy Efficiency and Conservation Authority (EECA).

Their appointment demonstrates that shareholders, in this case the government, recognise the need for technical expertise and engineering leadership on governance boards.

LTNZ was formed following the merging of Transfund and the Land Transport Safety Authority on 1 December 2004. The new Crown entity has resulted from the Government Transport Sector Review which recommended improved coordination and alignment to implement the New Zealand Transport Strategy. In particular the transport system must now be sustainable, as well as safe and efficient. ☺

Board Highlights 22 February 2005

- A governance agreement for the inaugural New Zealand Engineering Excellence Awards to be launched in November 2005 was approved (see article "New Zealand Engineering Excellence Awards 2005")
- The programme for the Planning Forum with Branch, TIG, SIG and Collaborating Technical Society representatives to be held on 9 April was formalised (see article "Charting IPENZ's Direction: have your say")
- The draft annual report on CPENG was reviewed. It was noted that fees paid by registrants were still not recovering the full costs of the system. A fee review is to be carried out (see article "Review of IPENZ Fees").
- Approval was granted for 41 elections into the Membership classes of Fellow, Distinguished Fellow or Honorary Fellow. Awards will be made at the Fellows' and Achievers' Dinner on Friday 17 March in Auckland (during Convention 2005), and citations published in the April *engineering dimension*.
- Winners of the various IPENZ Awards were approved. These will also be presented at the same dinner on 17 March.
- An opening event following our move to 158 The Terrace was approved. The event will be held on 8 April 2005 with Branch, TIG and SIG representatives, and external stakeholders invited. The building will be known as Engineers New Zealand.
- The Board ratified the decision of the Engineering Practice Board to sign the Urban Design Protocol, and agreed that we become a supporter of the "Year of the Built Environment".
- An updated budget forecast was received. The Institution expects to receive income of \$5.6m this year, and to break even at year's end. A new contract with the Tertiary Education Commission is the main new source of income.
- Technology Education New Zealand (the association for school technology teachers) was admitted as a new Technical Interest Group of IPENZ – the relationship with school technology teachers is seen as critical for the long term renewal of the profession.
- It was noted that there are 18 active complaints against Members or CPENG registrants, with one case at Disciplinary Committee stage and two at Investigating Committee.
- The Chief Executive of the new Department of Building and Housing (DBH), which is now responsible for the CPENG Act, REA Act and the Building Act, visited and discussed the relationship between IPENZ and DBH.
- It was noted that the Registrar had published the notice of dissolution for the Benevolent Society and the three month notice period would end on 9 March 2005, on which date the dissolution would be back-dated to 9 December 2004. The funds will transfer to the IPENZ Foundation bringing its total assets to about \$600,000 to be used for charitable works. ☺

WE ARE MOVING!

IPENZ National Office moves to new premises on Friday 11 March.

Telephones and internet connections will be disconnected at 12 noon on Friday but should be up and running again by Friday evening.

Business as usual Monday 14 March.

Our contact details remain the same:

Telephone: 04 473 9444

Fax: 04 474 8933

PO Box 12–241, Wellington

www.ipenz.org.nz

Our new physical address will be:

Ground Floor

158 The Terrace

Wellington

Should you need to contact the office urgently during the moving period, please ring Fiona Gavriel, Director – Operations, 021 303 629. ☺

New Zealand Engineering Excellence Awards 2005

Last year IPENZ announced that it was seeking partner organisations to develop the "New Zealand Engineering Excellence Awards" (NZEEA) as an annual event commencing in 2005. Potential partners have since been identified and planning for the inaugural Awards, to be held in November, is now underway.

The aim of the new Awards is to raise the profile of engineering in the wider community by acknowledging engineering excellence. The Awards will promote the key roles that engineers and their organisations play in addressing national goals through innovation, entrepreneurship and the development of infrastructure.

Awards to have their own identity

The Awards, to be run in partnership with other key organisations, are not IPENZ awards but "whole of profession" awards. They will have their own brand and identity and not the identity of the partner organisations. All partners for the NZEEA will be seen as equal contributors to the initiative. An NZEEA 2005 Management Board will be established later this month.

The proposed partnership agreement allows for other organisations to join as contributors in respect of particular awards. Hopefully many other bodies, such as CTS's, will choose to contribute in this fashion. Success for the Awards would be when every engineering society became a partner or contributing organisation, with a 500+ person event attended by dignitaries outside the engineering profession, attracting significant media coverage promoting engineering excellence.

Schedule of Awards

The proposed schedule of New Zealand Engineering Excellence Awards for 2005 is as follows:

- New Zealand Young Engineer of the Year
- New Zealand Engineering Entrepreneur of the Year
- New Zealand Engineering Innovator of the Year
- New Zealand Engineering Leader of the Year
- New Zealand Engineering Excellence Awards
- Supreme Award for Engineering Excellence

The New Zealand Engineering Excellence Awards will recognise the best

innovative project, product or service in eight different categories. Awards will be judged according to contribution to the national economy, impact on quality of life of relevant communities, and contribution to building the reputation of New Zealand engineering as world best practice. Entries from groups may include consultants, contractors and clients as is appropriate to the particular activity.

The eight categories for the New Zealand Engineering Excellence Awards are:

1. Building, Construction and Amenities
2. Utilities and Networks
3. Roads and Transport
4. Information and Communication Technology
5. Food, Bioprocess and Chemical
6. Mechanical and Manufacturing
7. Electrical and Systems
8. Sustainability and Clean Technology

The Supreme Award for Engineering Excellence will recognise the most outstanding project, product or service from the winners of the above eight categories.

Timetable

The proposed timetable is as follows:

March	Approval of judging criteria, conditions of entry, entry forms, appointment of judges.
April	Sponsors confirmed and publicity material soliciting entries prepared.
May	Entries open.
July	Entries close and judging commences.
September	Judging completed, finalists publicly announced.
October	Trophies and citations prepared.
November	Presentation event.

Judging criteria for the NZEEA is partially developed and will be published as soon as it is finalised. Volunteers prepared to assist in the project would be much appreciated! ☺

International Mobility

Chief Executive Dr Andrew Cleland summarised the range of international mobility agreements IPENZ is involved with and their respective benefits in the February issue of *engineering dimension*. The Learning and Assessment team are now busy ensuring IPENZ meets its obligations under the various mobility agreements for the June 2005 International Engineering Meetings to be held in Hong Kong.

Washington Accord

As part of this preparation an interim report was completed last December for the review of our signatory status under the Washington Accord. The report included information on our current accreditation standards and procedures, and a summary of accreditation activities over the last three years. The report will be appraised by other Washington Accord signatories prior to the June meetings.

The report highlighted, in particular, IPENZ's use of international representatives on New Zealand accreditation panels. For example Massey University's engineering programmes' five-year accreditation review last October included three international representatives on the 11 person team. Inclusion of international representatives on accreditation panels ensures international comparability.

APEC Engineer

Staff are also preparing for a "virtual" review of IPENZ's recognition under the APEC Engineer Agreement. The review is being used to trial procedures before formal reviews are undertaken. Once again, compiling this report highlighted the robust nature of our professional registration standards and processes.

The introduction of CPEng and the associated shift to ongoing current competence

assessments (rather than a periodic check of CPD), has strengthened our processes and this is something that we continue to promote with other jurisdictions to enhance the international mobility of registrants.

Enhancing international mobility

Signatories also contribute to the development of each agreement by supporting other countries to become signatories themselves. While we attempt to match the extent of our contribution with our small size (relative to most other jurisdictions), the strong ongoing demand for IPENZ assistance indicates the high regard in which our standards, processes and people are held internationally.

Over the past nine months we have worked with the Institution of Engineering Education Taiwan (IEET) to support the development of their application for provisional signatory status under the Washington Accord. IPENZ has now agreed to act as one of the two required nominators for IEET's application. This follows visits by two of our Standards and Accreditation Board Members (Prof Bob Hodgson FIPENZ, and Basil Wakelin FIPENZ), to observe and critique their accreditation processes, and review their final draft application documentation. The application will be considered and voted on by Washington Accord signatories in Hong Kong.

IPENZ has also been acting as a mentor for Singapore under the Washington Accord. We are currently reviewing the assessment statement they have prepared for provisional membership of the APEC Engineer Agreement and Engineers Mobility Forum (EMF). IPENZ has been asked to act as a formal nominator for Singapore's EMF application. ☺

Engineers as Leaders – Moving On Up

The Engineers as Leaders programme is gearing up to the next stage. Since the end of last year the President, the Chief Executive and key IPENZ staff have been considering how best to progress the programme. The conclusion was that the most impact for Members will be gained through both a public policy programme and a professional development programme.

Initiated in 2004, programme activities have centred on creating and assessing Membership demand for these programmes through the President's Branch visits, profiles in *e.nz magazine* and the upcoming "Convention 2005 – Engineers as Leaders". Members understand the importance of their roles as leaders and the contribution they make to the national economy. However, people outside the profession still need to be convinced.

Public policy programme

A policy paper will explore the major contribution to economic growth required from businesses with high levels of engineering and technical risk, and how we are preparing engineers to lead and manage these businesses.

There is evidence that both public and private sector capital investment has been low over the last decade, and that greater capital investment in research and development and the creation of intellectual property is a critical factor to raise labour productivity. The skills needed to acquire and deploy such capital include business leadership, but also go all the way down to trades for capital deployment.

Technically qualified professionals must have the general management skills to operate successfully in such an environment. IPENZ's role in this area will be examined in the policy paper. In the wider context we expect to look at national professional development, education and training right down to trades.

Engineering education is too technical to give the necessary leadership skills, and whilst the analytical skills of the engineer do add value when an engineer moves into management and governance, considerable other education and skill development beyond an engineering qualification is needed.

Professional development

Our current Professional Development Policy, which focuses on development and maintenance of competence, is under review. The findings of the Engineers as Leaders campaign will be reflected in that policy and might set out how engineers develop their career through the four stages. At Stages 1 and 2 engineers develop and maintain their competence. When engineers reach Stage 3 they may choose the general management route or become a technical expert. Some engineers will then take on governance roles.

Stage 1 Initial Engineering Education at Tertiary Level

Stage 2 Entry to the Profession (MIPENZ/CPEng)

Stage 3 Leader/Manager OR Technical Expert

Stage 4 Governance Role

The IPENZ professional development programme provides one pathway for engineers to develop managerial and leadership knowledge and skills which will ultimately enable them to move into governance roles.

The professional development programme run by the Knowledge Services Manager already offers one- and two-day short courses in the Branches for engineers who aspire to or are in management and leadership positions.

Engineers Australia model

The President and staff have further explored the model offered by Engineers Australia which created the Centre for Engineering Leadership and Management (CELM). IPENZ became involved in CELM when Dr Ian Parton, Dist. FIPENZ, filled a position on their board.

The two activities carried out by the CELM are:

- Identifying and assessing engineers with leadership and management competencies. CELM have four levels of competencies applicable to an

engineering career with Stages 3 and 4 being relevant to leadership, management and governance. When engineers are assessed as being competent at Stages 3 and 4, they receive the postnominal CEngExec (Chartered Engineering Executive).

- Providing networking and continuing professional development opportunities.

It was concluded there was little value in developing Stages 3 and 4 leadership and management competencies for the New Zealand environment or an assessment process with the associated costs to award another postnominal such as the CEngExec.

IPENZ Members can achieve recognition of Stage 3 competencies by becoming a Fellow of NZIM (or equivalent), and Stage 4 competencies by becoming a Fellow of the Institute of Directors.

Working with other professional organisations

IPENZ is exploring ways to work synergistically with a number of not-for-profit science or technology-based organisations to create professional development opportunities for Members and other technical people in leadership positions and for those aspiring to develop leadership skills.

The Royal Society of New Zealand is one of the organisations approached by IPENZ. The Society has conducted research in 2004 to discover the common themes in pathways taken by people in high profile companies to reach their leadership positions.

Discussions to date with the Society focused on how the IPENZ professional development programme would benefit engineers, scientists and technologists and the advantages of both organisations working together. Such synergies are more likely to be at the Stage 3 level.

Relationships are also being established with the Institute of Directors (IoD) so that Members will be able to network with others in governance roles and also develop the knowledge and skills to take on these roles through the governance education programmes of IoD.

Senior Members to mentor

If the profession is to have a high profile, senior Members who have moved into leadership and management positions in engineering-related businesses have a key role to play by sharing their knowledge and experience with younger professionals.

An adjunct programme to the Engineers as Leaders Programme will ask senior Members to contribute to mentoring and support for our professional development activities. We need "engineering manager mentors" as much as "engineering practice mentors".

These further developments of the Engineers as Leaders programme give Members opportunities to develop the knowledge and skills to progress their careers in leadership and management and will enable senior Members to contribute back to the profession. Most important of all, they ensure that the profile of the profession continues to be raised to the wider public through a sound public policy programme.

For further information on the Engineers as Leaders Programme contact Knowledge Services Manager, Sharon Wagg at swagg@ipenz.org.nz or 04 473 2022.

Notice of Annual General Meeting

The 91st Annual General Meeting of The Institution of Professional Engineers New Zealand Incorporated will be held at the Banquet Room, Waipuna Hotel & Conference Centre, 58 Waipuna Rd, Mt Wellington, Auckland, at 8.00am on Thursday 17 March 2005.

This is a prime opportunity for Members to participate in IPENZ governance issues.

Futureintech 2005 Initiatives

Posters and brochures

Futureintech have produced posters featuring some famous engineers to introduce engineering and its different fields as a prospective career to school students.

The posters use Rowan Atkinson (a.k.a. Mr Bean), Boris Yeltsin, Yasser Arafat, Leonardo Da Vinci, and Cindy Crawford (she was a top chemical engineering student before taking up modelling!) to grab students' attention.

The "Did you know these people were engineers?" theme is based on Futureintech's *Tearaway* magazine articles – a monthly newspaper targeting secondary students. The idea is for schools to display the posters in their science and technology classrooms.

A new series of brochures called "Choices" have also been produced by Futureintech to promote different career fields within technology, engineering and science.

The posters and brochures are available free to schools by sending an email to enquiries@futureintech.org.nz or phoning 04 473 2023.

Technology Beacon Practice Project

Futureintech is also working on the launch of the Technology Beacon Practice Project based in Wellington. This exciting pilot project supports technology teaching in four selected schools by providing industry support, funding and professional development to encourage good technology practice.

The results will be case studied and made available to other schools for inspiration and ideas on improving their technology teaching. Each of the schools involved have different, but exciting plans of action.

One school is focusing on professional development and industry visits for staff, another is designing lighting for an inner

city restaurant/bar, while the other schools are giving students external "clients" to work for, in the form of a neighbouring primary school and local businesses.

The project is helping to create and manage links between the schools, tertiary and industry groups.

Schools interested in the Technology Beacon Practice Project should visit Futureintech's website at www.futureintech.org.nz.

Futureintech Awards

There has been a lot of interest and enthusiasm from schools already this year for projects like the Young Designers Award and the Neighbourhood Engineers Award, so 2005 is promising to be an exciting year.

If you'd like to know more about Futureintech or get involved, visit our website www.futureintech.org.nz or phone 04 473 2023.

Futureintech is an initiative of IPENZ Engineers New Zealand and is funded by New Zealand Trade and Enterprise. Futureintech's aim is to promote careers and lift tertiary enrolments in technology, engineering and science. ☺



Hedy Lamarr – a famous actress during the 1940s, she invented a sophisticated anti-jamming device for use against Nazi radar, but no-one took her seriously. Years later companies began using her ideas for satellite communications, but she died in 2000 having never received any money or recognition for her work.



Rowan Atkinson – (aka Mr Bean), studied electrical engineering at Oxford University before taking up acting.



Alfred Hitchcock – the director of movie classics including *Psycho* and *The Birds*, Hitchcock trained as an engineer at St Ignatius College.

Graduate Member Joins List of Illustrious Kiwis



Auckland University engineering graduate Richard Beal GIPENZ, has been awarded a 2005 Rhodes Scholarship to study at the English-speaking world's oldest academic institution.

Richard, who has just completed a Bachelor of Engineering in Chemical and Materials Engineering, is one of only three students nationwide to be selected to study at Oxford.

He is described by his lecturers at University as an excellent, all-round, high achieving scholar with strong sporting interests and cultural and community involvement. Richard intends to study a doctorate at Oxford's Department of Materials Science focusing on sustainable energy technologies.

A former dux of Rosehill College, Richard says studying engineering was an obvious choice for him as he enjoyed maths and physics at school and the wide range of skills gained from an engineering degree had a great appeal. "It's amazing what an engineering degree can help you achieve in terms of being able to make people's lives better. I've really enjoyed my studies at The University of Auckland and find chemical and materials engineering very exciting."

Richard hopes to work on third generation solar cells. "These cells differ significantly from the first two generations in that they are based on titanium dioxide instead of silicon. This makes them far cheaper and eventually they should be easier to mass produce."

His goal is to return to New Zealand well-versed in solar-cell technology so he can implement sustainable energy projects here. ☺

Wellington Watch

- IPENZ made a submission on the Resource Management and Electricity Legislation Amendment Bill. Submissions closed on the 16 February and the Select Committee report is due in June 2005. For a summary of IPENZ's submission see article "IPENZ Makes Submission on Resource Management and Electricity Legislation Amendment Bill".
- IPENZ has established two consultation groups to consider the *Sustainable Energy: Creating a Sustainable Energy for New Zealand* discussion document and the *Freshwater for a Sustainable Future: Issues and Options* discussion paper. Submissions on both documents close in March. Any Members interested in participating in the consultation process, by either contributing or via peer review, should contact Claudine Dupuy on 04 474 8934 or email policy@ipenz.org.nz The IPENZ submissions will be made available in the Member Area of the IPENZ website for Member review prior to the submission closing dates.
- *An Engineering Discussion Paper on Spectrum Allocations for Studio to Transmitter Links* from the Ministry of Economic Development is available for review. Submissions close 11 March 2005. Any Members interested in participating in the consultation process, by either contributing or peer review, should contact Andrew Clark on 04 474 8986 or email aclark@ipenz.org.nz



Futureintech VIP Scheme: Keeping it Real

In 2004 Futureintech initiated the Visiting Industry Professionals (VIP) Scheme which provides funding for professional engineers, scientists and technologists to spend time at tertiary institutes – the aim being to build closer relationships between industry and academia.

Having an expert from the private sector on campus gives students a clearer sense of what to expect in the workforce and what skills are sought by employers. Academic staff also benefit, learning about developments in the private sector which can help improve teaching and research programmes.

Futureintech has a VIP Scheme budget of \$35,000 a year and can fund up to seven tertiary institutes with a maximum of \$5,000 each.

Last year, communications consultant Ian Williamson AIPENZ, of Business Computers Limited took part in a VIP-funded project. He spent three weeks with staff and students at Christchurch Polytechnic's Institute of Technology (CPIT).

For Mr Williamson, helping a student stuck against a "brick wall" was one of the highlights of his time as a VIP. "The poor guy had been stuck on a problem with his project for months and was getting nowhere. I didn't solve it for him, he did that himself, but I was able to act as a mentor to bounce ideas off."

Mr Williamson had worked on similar projects before so was able to direct the student through a checklist of things to look at. The solution came to the student one night. "It finally hit him; he came in the next day, rewired it and the whole thing worked. That was brilliant, that one moment alone made the whole thing worthwhile."


As a specialist in radio communications, Mr Williamson's expertise were used for guest lectures, moderating marking, helping students with research projects and advising on curriculum content.

"We wanted Ian because of his breadth of experience," says Paul Wilson FIPENZ, Dean of Design and Engineering at CPIT. "He has international experience and a really good appreciation of where the industry is, and where it's going."

Mr Williamson was able to give the polytechnic students "real-world experience", helping to reinforce their tutoring and instruction and putting it all into the context of what is actually happening in industry.

For his part, Mr Williamson says the VIP scheme was a fulfilling project to be involved with. "I just loved it; I've always enjoyed teaching so this was a great opportunity. I've been around a bit and worked on a lot of different projects, so I think it was very educative for the students and tutors to have real-world scenarios. I'd love to do it again."

This year's application round has just closed, but to find out more about Futureintech's VIP Scheme visit www.futureintech.org.nz or phone Phil Rennie on 04 473 2026.

Futureintech is an initiative of IPENZ Engineers New Zealand and is funded by New Zealand Trade and Enterprise. Futureintech's aim is to promote careers and lift tertiary enrolments in technology, engineering and science. 

Distinguished Fellow Wins Top Award



Neville Jordan, Dist. FIPENZ and Chairman of Endeavour Capital, has won the Flying Kiwi Award in recognition of his achievements in advanced technology.

Presented at the Westpac Hi Tech Awards held in November last year, The Tait Electronic Flying Kiwi Award celebrates "the New Zealander who has achieved significant success in the Hi-Tech sector for themselves and their organisation through immense and sustained efforts."

Neville started his first business in the 70's, founding Lower Hutt-based MAS Technology Ltd with little more than a BE in electrical engineering, \$2000 of

capital and a strong drive to establish his own electronics business.

The design company grew to 170 staff, earning more than \$50 million in foreign exchange through exports to 55 countries. In 1997 it was the first and only private New Zealand company to successfully list on the US NASDAQ market.

After he sold his stake in MAS Technology Neville went on to establish Endeavour Capital, a venture capital company financing small science and technology-based companies.


Neville is currently a member of the Prime Minister's Growth and Innovation Advisory Board. He also set up the Jordan Foundation which funds many educational scholarships at secondary school and university level. 

Review of IPENZ Fees

A review of IPENZ registration and Memberships fees is proposed for 2005.

Director – Learning and Assessment, Brett Williams, says IPENZ staff are in the process of gathering the financial information needed for the review. A particular focus will be in the area of CPEng-related fees: "Two years after the introduction of CPEng we now have a much clearer picture of the full cost of the system," says Mr Williams. Without prejudging the outcome of the review, Mr Williams suggests the following factors indicate a fees increase is likely:

- IPENZ reserves, ultimately Member subscriptions, subsidised set-up costs for the CPEng system and continue to subsidise the assessment process.
- Market rates for professional engineers have increased significantly over the last two years, and rates of remuneration for Staff Assessors need to be reviewed for relativity with the market.
- Data gathered on the assessment process indicates that Staff Assessors are not being paid for all of the time spent evaluating applications.

Members will have the opportunity to provide input into the review during a period of consultation planned to begin in June. No changes in fees will be made without careful consideration of Members' feedback. 


IPENZ Invoices Now Payable Online

Members can now access their financial information online via a new section in the Member Area of the website.

If you have any outstanding invoices for IPENZ, Technical Group Memberships, CPEng or IntPE registers you will see each item described along with its cost.

Members may then choose to pay their invoices via a secure online credit card transaction. The paid amount and any outstanding fees will be itemised on the following page along with the date, a GST number and the IPENZ address. Members may print this page as a receipt of payment.

Members paying by direct debit will also be able to view their payments, any remaining fees, and have the opportunity to pay the remainder by credit card if they wish.

Any changes to your invoice must still be made through IPENZ National Office on 04 476 9444 or by emailing ipenz@ipenz.org.nz 



William Ernest Russell FIPENZ

26 July 1917 – 21 August 2004

Chemical engineering pioneer William (Bill) Russell carried out the first trials of aerial top dressing using granulated superphosphate – a practice which continues today.

Born in Whangarei, Bill graduated with a Master's in Science (Hons) from Auckland University, joining New Zealand Farmers Fertiliser (later FERNZ) as works chemist at the Te Papapa works.

Following a four-year stint at the Australian Fertilisers Limited at Port Kembla, Bill returned to Te Papapa as works manager in 1954 and quickly converted the existing lead chamber process to the new contact acid process he'd worked with at Port Kembla.

By 1962 Bill was works superintendent with responsibility for all of FERNZ's processes. Again, implementing leading-edge technology, he converted the Kempthorne Prosser works at Otahuhu to a granulation process, and was a pioneer in the manufacture of sodium fluosilicate, which supplied fluoride to local bodies.

Other projects included the installation of two new plants for the manufacture

of chromium sulphate for wood treatment and leather tanning; pioneering aerial top dressing using granulated superphosphate; and introducing the manufacture of aluminum sulphate for use as a flocculent in the pulp and paper industry. Bill's projects were always true "chemical engineering" and his knowledge of unit operations extensive.

A keen advocate for chemical engineers, Bill was an active Member of the IPENZ Branch Committee, chair of the moderating panel for Auckland University's Chemical and Materials Engineering Department and at his urging, convinced FERNZ to financially support the education of chemical engineers.

Outside of the chemical engineering realm, Bill was an enthusiastic trampster in his younger days with an extensive knowledge of local fauna and flora. He was also a keen gardener and continued to keep fit in his later years by swimming daily.

Bill retired from engineering in 1982 and although the superphosphate plants have passed over to other ownership, his legacy in the manufacture of superphosphate remains.

Survived by his wife Maureen, three children and four grandchildren, it was always a matter of considerable pride to Bill that his son David Russell followed him as a chemical engineer, and later, also his grandson Dr Bruce Russell.

Thanks to David Russell. 

IPENZ Makes Submission on Resource Management and Electricity Legislation Amendment Bill

The Resource Management and Electricity Amendment Bill had its first reading in Parliament in December 2004. The new Bill hopes to improve key problem areas in the implementation of the Resource Management Act 1991.

The objectives of the Bill are to:

- enable central government to better express the national interest so decision-makers have clear guidance on how to take national interest matters into account
- enable consent processes to be undertaken in a manner that is effective and efficient, and that provides certainty of process for applicants
- improve the effectiveness of planning documents, and to enable their timely development
- improve certainty of consultation requirements for resource management matters
- provide certainty over the allocation of natural resources
- provide for the environmental effects of high voltage electricity works in the road corridor to be managed using processes under the Resource Management Act 1991

The changes to the Bill came after a period of review and consultation with business, local government, environmental organisations and the broader community over the past year and half.

IPENZ Submission

The IPENZ submission generally supported the Bill, although in its conclusion it doubted that the proposed changes would result in greater efficiency and decreased costs and delays. The IPENZ submission concentrated on three areas:

1. Expressing the national interest

It indicated support for the greater use of National Policy Statements (NPS) and National Environmental Standards (NES) to express the national interest, including the requirement that Regional and District Plans must "give effect" to national policy statements. However the submission did express some reservation as to the effectiveness of untested tools that had been previously underutilised by Government.


It indicated support for the proposed provisions for central government involvement in the local decision-making process, these include issuing a government submission, directing that applications be heard jointly, appointing a person to the locally led hearings panel or "calling in" the application. However, the submission noted that government submissions will need to be consistent, despite the potential for conflict within government departments, in what is indicated to be in the national interest. The submission also noted that the new Bill does not detail the assessment process that the Minister would undertake in determining whether central government involvement was required; the effectiveness of this provision will very much depend on the assessment process.

2. Natural resource allocation

Under the Bill the allocation of natural resources becomes an explicit function of regional authorities, the IPENZ submission supported this provision but noted that leadership from central government in the form of NPS or NES will be required. The submission also indicated support for the clauses that provide for an existing consent holder to have priority over other applicants when the consent expires, and the recognition of existing investment as a factor in decisions on resource consents.

3. Local authority hearings and the Environment Court

The Bill significantly expands local authority and hearing and pre-hearing powers and places a greater onus on local authority decision-makers by limiting the jurisdiction of the Environment Court. The IPENZ submission indicated doubt as to whether these changes would increase certainty, reduce delays and costs, ensure consistency or improve the quality of decisions. Compulsory accreditation may address perceived inconsistency in the quality of current decision-making but combined with the decreased jurisdiction of the Environment Court, there is likely to be a significant delay between quality local authority decision-making and the ability of the Environment Court to act as a safety net.

The full submission on the Bill is available on the IPENZ website at: http://www.ipenz.org.nz/ipenz/media_comm/issues.cfm 



IPENZ Professional Development Short Courses

March – June 2005

The Professional Development Programme for 2005 is designed specifically to develop and maintain Members' competencies as professional engineers, engineering technologists and engineering technicians.

Our programme includes some of the highly-rated short courses from 2004 and introduces a range of new ones.

Professional Communication

This successful two-day course covers Effective Report Writing and Professional Presentations. People may register for one or both days.

Location	Date
Auckland	10–11 March
Invercargill	7–8 April
Nelson	5–6 May

Hazardous Substances and New Organisms Implementation **NEW!!**

This two-day course will focus on providing engineers with a comprehensive understanding of the Hazardous Substances and New Organisms Act and the implementation of it.

Location	Date
New Plymouth	12–13 April
Auckland	17–18 May

Leadership and Management for Technical Professionals

Participants will learn how to effectively handle their dual leader/manager role. Participants will also be taught the importance of the "soft skills" and key techniques for managing relationships.

Location	Date
Auckland	6–7 April
Dunedin	31 May – 1 June

Ethics for the Professional Engineer

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

Location	Date
Dunedin	14 April
Christchurch	15 April
Tauranga	22 April
Wellington	29 April

Timber Design Seminar **NEW!!**

This seminar presents current information relating to design options and NZ Building Code developments.

Location	Date
Wellington	6 April
Christchurch	7 April

See the website <http://www.ipenz.org.nz/ipenz/nzecal/ks.cfm> for details of seminar fees.

Negotiation Skills for Engineers **NEW!!**

This interactive, practical 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.

Location	Date
New Plymouth	19 April
Auckland	10 May
Wellington	11 May

Finance for Engineers and Technical Professionals

Every businessperson needs to understand the financial implications of their decision-making. This two-day course will cover financial accounting, management accounting and financial management tools.

Location	Date
New Plymouth	5–6 May
Tauranga	13–14 June

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.

Location	Date
Taupo	25 May
Wellington	21 June

Contract Administration **NEW!!**

This course covers essential aspects of contract administration for the engineer including: types of contract, documentation, parties to the contract, contract law, compliance, communication, records, and payments.

Location	Date
Wellington	8–9 June
Auckland	15–16 June

Places on these courses are limited to 20 so register early to avoid disappointment. Registrations close one week before the start of the course in each location.

Cost:

Two Days	\$945.00 incl GST – IPENZ Members
	\$1035.00 incl GST – Non-Members
One Day	\$495.00 incl GST – IPENZ Members
	\$540.00 incl GST – Non-Members

Participants may choose to do a work-based project after the course finishes and submit it to the facilitator for feedback. If this assessment option is chosen, the additional cost is: \$54.00 incl GST. Once successfully completed, participants may claim two hours for every hour of course attendance on their CPD records.

All courses may be tailored to suit the needs of organisations. Full details on each course are available at <http://www.ipenz.org.nz/ipenz/nzecal/ks.cfm> or by emailing CPD@ipenz.org.nz or telephoning Josie Nolan 04 474 8982. ☎



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