

## **President's Message** **Strategic Focus**

The July Board meeting addressed two important items: a review of our Vision and Mission, and the budget for the coming year. The review of the Vision and Mission was an initiative proposed earlier this year at our annual strategic workshop. It is important to me that the Vision and Mission should be concise, meaningful and accurately portray the nature and concept of IPENZ's future business. The review is being led by the IPENZ Deputy President, Roly Frost.

Our budget for the coming financial year is a break-even budget with income shown at \$5.2 million and expenditure at about the same level. Other key points from the budget include subscriptions being held at the same level for another year, and the success of IPENZ in diversifying its income base so it is less reliant on subscription income. Five years ago, subscriptions formed 70% of the IPENZ income but for the coming 2004/2005 year, will only be about 40% of our income. The majority of the increase arises from more activity in the Futureintech contract, which will also make a larger contribution to overheads this year. The short course programme developed by Knowledge Services will also generate more income, but costs will rise commensurately. With the sale of the building interest, income has also risen, but this will be partially offset by increased rental expenditure as we move to new premises. Overall, the Institution is in very good financial shape.

During my recent visits to the regions it has become very apparent that the Branches, and Branch meetings, are the front line of the Institution. They are the forum where Members can discuss matters relating to the profession and share experiences. However, we all lead busy lives and combining organisation of Branch meetings with work and family commitments is becoming increasingly difficult. At the Branch and Technical Group forum held in February this year, the suggestion was made that a Branch meeting facilitator be employed to assist the Branch committees with organisation of Branch meetings. This suggestion has certainly been confirmed at the Branch meetings I have attended so far, and accordingly the Board has made provision in the budget to employ a facilitator. We will keep you informed as this initiative develops.

The Board has also resolved to proceed with the proposed National Engineering Excellence Awards programme to be launched in 2005. The new awards will promote engineers as leaders to the wider community and will highlight the key roles that engineers have played in addressing national goals through innovation, entrepreneurship and development of infrastructure. This is another element of our over-arching strategy to raise the profile of the profession and to portray 'Engineers as Leaders'. We will be working to secure the support of partners for these awards from the engineering and construction industry. The IPENZ Awards will continue to be presented at Convention with the focus being on Members and supporting professional development and engineering practice through the recognition of high achievers within the engineering profession (see next article).

Last month saw the visit of Professor David Nethercot, President of the Institution of Structural Engineers, and his Chief Executive Dr Keith Eaton. Their visit to New Zealand was part of the IStructE's regular programme of visits to sister organisations. During their visit they met with IPENZ representatives Andrew Cleland and John Gardiner to sign a new cooperation agreement between IStructE

and IPENZ. The agreement will allow closer links between the two organisations and facilitate access of IPENZ Members to membership grades of Associate and Member of IStructE.

Infrastructure is currently very topical, not just because of the issues in Auckland, but also due to the Infrastructure Stocktake commissioned by the Ministry for Economic Development that highlighted expenditure on infrastructure over the next five to 10 years. There is also a growing realisation of the strong links between the quality of infrastructure and GDP growth. More recently this has been the focus of further attention with major construction firms in Auckland saying they are facing severe shortages of skilled labour.

The MED Stocktake reported that there were no new issues identified in the report that could not be dealt with by existing programmes. However, the report was at a high level and of a "headline" nature and I remain unconvinced that the current government programmes will be able to provide the quality of infrastructure required to meet the needs of industry and to maintain our economic growth. IPENZ has made a submission on the Stocktake and I spoke to the Employers and Manufacturers Association (Northern) on the report – giving an IPENZ perspective and presenting ideas for improvement.

During July I also spoke to the Wellington Branch delivering my Presidential address of 'Engineers as Leaders' and in September I will be taking the Presidents' Roadshow further south to Christchurch and Dunedin. I look forward to seeing you all during those visits.

**Ian Parton**  
President

## **New awards scheme**

A new standalone National Awards programme is to be launched in the final quarter of 2005, with the first event to be held in Wellington.

The new awards will promote engineers as leaders to the wider community and will highlight the contributions that engineers make to the economic, social and environmental outcomes of NZ. Other IPENZ Awards will continue to be delivered at our annual Convention, to identify and celebrate the achievement of individuals and organisations within the engineering family.

### **Why two separate awards?**

IPENZ has two principle objectives for having an awards programme: to support engineering practice and professional development amongst our Members; and to promote to the wider community the contributions that engineers make to NZ's economic, social and environmental outcomes.

The internally focussed IPENZ Awards have been successful in achieving the first objective – supporting engineering practice through the celebration of excellence in practice, and supporting professional development by recognising high-achieving senior Members through the awarding of Fellowships.

However, while we have previously sought to promote the IPENZ Awards to the wider public, the activity has been more focussed on our internal audiences. The relationship of the IPENZ Awards programme to the goal of promoting engineers as leaders on national and community issues, has been left largely unexplored.

**continued overleaf >>>**

# The Hume Fellowship

Applications are invited for the Hume Fellowship, established by Henrietta Hume in memory of her husband Harry Hume, a distinguished civil engineer. Its purpose is to help young civil engineers further their professional skills through specialist study or internships, usually overseas, to benefit New Zealand and the engineering profession.

Up to NZ\$30,000 will be awarded to a New Zealand Citizen, preferably aged 25–35 years, with a degree in civil engineering or a related discipline, selected on their potential and the merit of their proposal. Fellows are expected to contribute to New Zealand professionally for at least two years after the award and produce a report on their achievements.

Applications should include:

- the proposed topic, duration and place of study
- an indication of ability and application in the relevant area

- benefits to the engineering profession in New Zealand
- names and contact details of three referees
- a CV including age, nationality, qualifications, publications, awards and employment history

Applications should be forwarded to:

**The Hume Fellowship**  
c/- Director – Operations  
**IPENZ**  
**PO Box 12 241**  
**WELLINGTON**

Applications close  
Friday 1 December 2004,  
and interviews will be conducted  
early in 2005.

Further information can be obtained at [www.ipenz.org.nz/hume](http://www.ipenz.org.nz/hume)

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To achieve our second objective and successfully promote engineers as leaders to the wider community, a second awards programme has been developed – the National Awards programme, to be delivered as a separate event.

## IPENZ Awards

The IPENZ Awards will still be promoted to the wider community as much as possible, but will be focused on our Members. The goal of the IPENZ Awards is to support professional development and engineering practice through the recognition of high achievers within the engineering profession. IPENZ Awards will be delivered at the IPENZ Convention and include:

- Fellowships, Distinguished Fellowships and Honorary Fellowships
- Annual service awards (Presidents, Professional Commitment, MacLean Citation)
- Student Design Award
- Engineering Technical Achievers Supreme Awards (4 of 8 per year)
  - Building, Construction and Amenities (2005)
  - Utilities and Networks (Water, Waste, Energy, Communications) (2005)
  - Food, Bioprocess and Chemical (2005)
  - Electrical and Systems (2005)
  - Sustainability and Clean Technology (2006)
  - Transportation (2006)
  - Information and Communication Technology (2006)
  - Mechanical and Manufacturing (2006)

## National Engineering Excellence Awards

The main objective of the National Engineering Excellence Awards is to raise the profile of the engineering profession in the wider community. This will be achieved by highlighting (to the wider community) the key roles that engineers have played in addressing national goals through innovation, entrepreneurship and development of infrastructure that meets community needs. The new awards programme will be delivered at a standalone event to be launched in the final quarter of 2005, and to be branded as the National or New Zealand Engineering Excellence Awards. Awards to be presented at this event will be:

- Young Engineer of the Year
- Engineering Entrepreneur of the Year
- Engineering Innovator of the Year
- Engineering Leader of the Year
- National Engineering Excellence Awards in 8 categories:
  - Building, Construction and Amenities
  - Utilities and Networks (Water, Waste, Energy, Communications)
  - Transportation

Information and Communication Technology  
Food, Bioprocess and Chemical  
Mechanical and Manufacturing  
Electrical and Systems  
Sustainability and Clean Technology

- Supreme Award for Engineering Excellence (any of the above winners)

**Entries are now open for nominations to the IPENZ Awards. Entry forms, including Conditions of Entry, are available on the IPENZ website [www.ipenz.org.nz/awards](http://www.ipenz.org.nz/awards) or for more information please contact Lorraine Brown, [lbrown@ipenz.org.nz](mailto:lbrown@ipenz.org.nz)**

**Full criteria and call for nominations to the National Engineering Excellence Awards for 2005 will be available early 2005. Members will be advised when entries open.** ☺

# Wellington Watch

- Policy Staff represented IPENZ at the Innovation survey seminar and the Renewable Energy Forum.
- Policy Staff attended the Social Services Select Committee hearing of submissions on the Charities Bill.
- A submission to the Ministry of Economic Development was made on the Infrastructure Stocktake. Submission available at: [http://www.ipenz.org.nz/ipenz/media\\_comm/issues.cfm](http://www.ipenz.org.nz/ipenz/media_comm/issues.cfm)
- Dr Ian Parton spoke on engineering and infrastructure at a policy debate hosted by EMA Northern.
- IPENZ staff consulted Members on a draft submission on 'The Distinctive Contributions of Tertiary Education Organisations: a TEC Consultation Paper'.
- Policy staff consulted Members on the Government's Draft Digital Strategy. Submission to be posted on our website after 16 August 2004.
- IPENZ staff met with the Hon Harry Duynhoven, Associate Minister of Transport and Energy to discuss how to better communicate to Parliamentarians, the key role of engineers in delivering national strategies.



# Nominations for Distinguished Fellow, Honorary Fellow, Fellow

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

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

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

Additionally, they will have:

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

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

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

Individuals can also be nominated to the position of Companion. A Companion is a Member who has not been educated in engineering or technology, but who has attained a position of responsibility related to engineering or technology.

Fellowship nominations should follow the guidelines set out in the Fellow nomination documents, which are available from:

[www.ipenz.org.nz/ipenz/who\\_we\\_are/honours//fellows.cfm](http://www.ipenz.org.nz/ipenz/who_we_are/honours//fellows.cfm) or by contacting Josie Nolan, [jnolan@ipenz.org.nz](mailto:jnolan@ipenz.org.nz)

Nominations should  
be submitted by  
30 September 2004

Enhancing  
Engineering  
Competence



## Why is the 'soft stuff' so hard?

When planning their professional development activities, engineers put much emphasis on refreshing their technical knowledge. We wouldn't want to downplay the importance of keeping up-to-date with technical knowledge and skills; but we sometimes wonder whether engineers favour this area because it is well within their comfort zone. After all, codes, design techniques, and new analytical tools are "safe". They are visible, predictable and generally deliver tangible benefits.

Enhancing "soft" skills, on the other hand is easy to put off – it takes precious professional development time for no obvious immediate gain. Many people just don't feel comfortable reflecting on their relationships with their peers, colleagues or clients, and articulating to others their feelings, behaviours and values. It's easy to write off these people-oriented skills as "airy-fairy" and relevant to anyone but oneself, and many engineers spend little professional development time learning how to communicate, relate and manage people better. Yet these are the skills that make or break engineering organisations, teams and individuals.

Maori have a proverb which ends with "He aha te mea nui o te ao? He tangata, he tangata, he tangata" – "What is the most important thing in the world? It is people, people, people!"

It is well known that the "soft" skills cause engineers, their clients and

their colleagues the most grief. The most common cause of complaints against Members is the breakdown of relationships with clients due to poor communication. It is accepted that the best solutions come from teamwork – but this of course means that engineers need to deal with people who have a range of values, personalities, behaviours and ideas.

In particular, engineers need to learn how to deal with conflict in a constructive way. Trainee mentors are taught that conflict in teams is good – it means team members feel comfortable challenging and sharing ideas and solutions. Having accepted it, the trick is to manage conflict appropriately.

This includes analysing and managing one's own part in conflict. If an engineer engages in some self-reflection and recognises behaviour that needs to change, that's just the beginning. Modifying the behaviour habits is HARD!! It takes constant effort and reflection, and a long-term commitment. It is too easy to fall off the wagon and regress.

IPENZ has developed some short courses to help Members enhance their soft skills. We challenge you all to look hard and honestly at yourselves, and ask yourselves, "Would I benefit from participation in one of these courses?" Of course, attending an IPENZ Professional Development Course is just the first step in a long and sometimes difficult journey – using the knowledge imparted to modify behaviour for the long term is the hard part. ☺

# Revised Engineering Practice Strategy

Engineering practice covers the broad range of activities undertaken when supplying professional engineering services; from project implementation activities such as writing briefs and specifications, to managing contracts, designing solutions, managing implementation, asset management and meeting regulatory requirements.

Engineering practice support is the term we use to cover the range of assistance IPENZ can provide to Members to help them perform their engineering practice duties.

## History of IPENZ Engineering Practice Support

Up until the mid-1980s most of IPENZ's engineering practice was centred on supply of new knowledge:

- New Zealand Engineering monthly magazine
- annual Conference of presented papers
- limited technical groups
- Branch meetings that usually involved some form of technical presentation (generally written up in New Zealand Engineering or presented at the annual Conference).

In addition most Members were employed in large state-owned organisations that had well-resourced technical libraries, access to local and overseas codes of practice, and sufficient resources to access and develop advanced knowledge when required.

For engineers not employed in these organisations, much of the knowledge developed was publicly available anyway. Many New Zealand engineers also belonged to UK discipline-based institutions such as IMechE and IEE. These provided them with additional practice knowledge in their discipline areas.

The reforms of the mid to late-1980s reduced many of the state-owned organisations and while the intellectual property that had been built-up was still available, it was not being maintained. Meanwhile IPENZ practice activities were also changing:

- more resources were allocated to subsidise technical groups as they grew in number and membership
- Transactions (the IPENZ technical publication of the time) became more of a publisher of last resort as academics faced pressures to publish internationally and practitioners were not provided resources to publish the outcomes of their work
- New Zealand Engineering became less technical and more generalised
- the annual Conference became less of a major

event as technical groups and societies developed their own events

- IPENZ was reduced in its ability to exercise leadership in the engineering practice area when the Executive Committee for Engineering Science was dismantled as part of the "Pathways" reforms of 1992

By the early 1990s the IPENZ focus in the practice area was diminished, and in the ensuing vacuum, other organisations started to provide engineering practice support to their Members – ACENZ, and a number of Collaborating Technical Societies (CTSs) and Technical Interest Groups (TIGs), (particularly Ingenium, NZGS, SESOC and NZSEE) took on the role of providing guidance information. Other effective groups providing engineering practice support to certain parts of the engineering profession included the Electricity Engineers Association and the Water and Waste Association.

However in 1997, a change was made in our practice support activities. Included was a renaming of the programme from engineering science to engineering practice, to reflect an approach making it more relevant to Members, greater re-engagement in policy issues, and a move to reduce the subsidy to technical groups in order to channel subscription resources more directly to the delivery of engineering practice support to our Members.

In recent years, the engineering practice programme has been built up to include:

- a technical advisory board to provide strategic leadership (the Engineering Practice Board)
- a full time Engineering Practice Manager
- a range of engineering practice outcomes eg: Practice Notes
- support for Members participating in codes and standards development processes of other organisations (mainly Standards New Zealand)
- establishing *engineering treNZ* as a knowledge service for Members based on critical reviews of engineering knowledge (these have been partly successful)
- making submissions on important legislation or regulations affecting the engineering profession eg: contributing to policy work associated with the new Building Bill
- successful handling of the Scarry Open Letter through a Practice Review framework

Other engineering practice related features of our current service package include:

- a small contribution from Branch programmes which have become more networking and general interest events rather than events to exchange engineering knowledge
- attempts to establish the annual Convention as a hybrid event where both national issues are discussed, and technical information is exchanged. This has not yet been understood and appreciated by Members so it continues to suffer low turnouts and poor financial performance
- entering the field of short course provision seeking to provide learning in important fields, and making learning opportunities available
- developing a relationship with the Energy Library which provides access for our Members to a range of engineering related information

## What changes have affected Members' needs?

The mid-2000s has seen a considerable change in engineers' attitudes towards engineering knowledge, and the accessibility and supply of engineering information in New Zealand. For example:

- after years of indifference, many engineering employers are recognising the need for their staff to have access to engineering information and knowledge
- an increasing number of engineers are once again employed in large organisations with the critical mass able to access and develop engineering knowledge (though many engineers remain working in small consultancies)
- there is a surfeit of new information published internationally, and available quickly via the internet in a variety of forms
- large US and UK-based institutions have become international knowledge providers and are seeking to remain key forces in New Zealand
- Members travel internationally to events at which they can access new knowledge
- there has been continued growth in technical societies including CTSs and TIGs who run excellent events to share new information in a range of important practice fields
- short course activity for Continued Professional Development has increased, provided by various commercial as well as tertiary sector providers

# - 2004 and Beyond

## IPENZ as a Regulator

The case can now be made that as the registering authority under the Chartered Professional Engineers Act 2002, IPENZ has a role in engineering practice as one of the “regulatory family” – the statutorily appointed regulator of the engineering profession. The Act creates a supply of quality-marked people available to other regulators to specify as suitable persons for restricted engineering activities.

The case is particularly arguable for building and construction work where CPEng is becoming used as the competency mark for engineering work performed under the existing Act. The proposed legislation will further advance this as CPEng will become the category of Licensed Building Practitioner for engineering services in the building industry. The concept can be extended to any area where the regulators call up CPEng as being the mark of competency for those performing work under the relevant legislation.

We also have one instance where IPENZ has exercised a further role in a regulatory sense (apart from the day to day operations of CPEng) – our response to the Scarry Open Letter in 2003. While the Building Industry Authority conducted a parallel activity, the government left it up to IPENZ to investigate the content of the letter and handle its political ramifications. We did this through a Practice Review, introducing a new type of activity into our portfolio of engineering practice tools.

What we are observing evolve, is a regulatory framework which sits between the self-regulation model dominant in the 1990s and the central regulatory models which preceded the 1990s. This is in essence the co-regulatory model. It involves a mixture of regulation by the State with the relevant profession/sector providing a complementary framework. In parallel with this is the recognition that better regulation comes from having a balance of standards for people, and standards for practice.

Putting the co-regulatory model into an engineering context means that the responsible government agency will set the policy framework including the top level standards for both people and practice, but will rely on the engineering profession to develop the specific engineering standards. Good regulatory practice requires a shared understanding of what constitutes good engineering practice by both the supply-side regulator (IPENZ) and the demand-side regulators.

If CPEng is used as the reference point for

engineering competence (as it should be to be consistent with the government’s intention), the demand-side regulator just needs to define this requirement. IPENZ then takes the lead in setting the competence standard but expects that the co-regulator engages with us – particularly in the standard-setting process and feedback on performance of those holding the CPEng mark. For practice standards, they set the overall performance requirements and then rely on the profession to define the acceptable means of achieving those standards but in conjunction with the regulator.

## Implications of IPENZ as Regulator

The implications for IPENZ as a co-regulator, are that wherever CPEng is called up, IPENZ needs a positive ongoing relationship with the relevant regulator. Through these relationships we need to develop the concept of co-development of any guidance information being issued, whether that guidance information is encapsulated in a formal Standard, or in a less formal form.

The process outlined above is not without risk. If IPENZ is involved in the quality-marking of engineering knowledge, and Members rely on that knowledge, then there is the potential for remedial action to be sought against the Institution in the case of failures. The defence against this must, as it always has been, be one of process. The profession works at the frontiers of knowledge, and what is good practice can only be decided collegially amongst peers in the profession. If the Institution uses peer review processes, and states that the engineering knowledge it has quality-marked represents the collective view of the profession, but that individual engineers must still exercise judgement in deciding whether it is appropriate to apply that knowledge in particular situations, then the risk should be acceptably low. This is what IPENZ already does on our Practice Notes.

Another risk is the perceived erosion of our independence as a professional body. On reasonably regular occasions we are asked by Members to act on their collective behalf with regulators to improve the “climate” for practitioners. Issues we have dealt with include: regulations leaving little room for innovation, undue professional risk being placed on engineers, divergence interpretation between regulators, and regulations not reflecting the dynamics of the sector to which they apply. By being part of the regulatory family our ability to represent Member needs are reduced. Balancing this, we may find

that regulators are more willing to listen to our concerns. Overall it is an issue that will need to be managed.

## Strategy for Engineering Practice 2004 – onwards

Due to the accessibility of new engineering knowledge from other sources, IPENZ expects that Members will continue to place less importance on access to this knowledge through their professional body. Rather they will be seeking knowledge that they can rely on in their practice. In short, they are looking to the Institution to add value through the quality-marking of knowledge, thereby turning it into valuable engineering knowledge in the New Zealand engineering practice context.

It is therefore proposed that IPENZ moves its engineering practice programme away from the provision of new engineering information, and towards the quality-marking of practice related knowledge such as guidance and standards.

The overall engineering practice programme will therefore concentrate on the following elements to increase the volume and comprehensiveness of quality-marked knowledge available to IPENZ Members through the Institution:

- a. Continue our programme of submissions to improve the legislative and regulatory environment in which New Zealand engineering is practised.
- b. Build co-regulation relationships with other regulators, and seek to develop quality-marked knowledge/information development programmes with them, ideally attracting their funding to assist in the development process.
- c. Provide active leadership in developing codified knowledge (from Standards to codes of good practice to looser design guidelines), including working with relevant TIGs and CTs to ensure robust peer review processes.
- d. Provide active co-branding of quality-marked international and national engineering knowledge with other relevant parties including ACENZ and CTs.
- e. Develop *engineering treNZ* towards a comprehensive critical reviews publication as a means of summarising and evaluating engineering knowledge. 

# Futureintech Update

## New Facilitator for Wellington

Futureintech has appointed a new Facilitator for the Wellington region – Phil Sadgrove. Phil has been working for Te Kete Ipurangi, the Ministry of Education’s portal website, as Online Editor for technology education.

Phil gained qualifications in both science and law before training as a primary teacher. We’re looking forward to Phil joining the team on 6 September, and continuing the good work already established by Marilyn Daly.

## Supporting technology in the classroom

A key aspect of Futureintech is to support classroom teaching. We support practical projects that can help make subjects like maths, science and technology exciting and relevant for students.

Futureintech Ambassadors have a key role to play by acting as consultants, advisors and mentors for these projects.

## So what exactly are the projects we’re supporting?

**The Neighbourhood Engineers Award** is an IPENZ competition involving practical, close-to-home projects that impact on the school or local community. Teams consisting of a teacher, students and volunteer engineer are challenged to work through the technology process to meet an identified need or exploit an opportunity in their school or community.

Previous examples have included designing and building new playgrounds and outside seating. Successful schools can win prizes of up to \$2000.

**Crest** is an international awards scheme which encourages creative and practical student projects. Students can enter as individuals or in teams. It’s non-competitive, and caters for different ages and abilities.

Examples of previous projects include designing and building magpie and possum traps, right through to studies on mouth guards and cell phones.

**Bright Sparks** provides an electronics course offered as part of NCEA, and encourages mentoring and industry links for students interested in electronics.

## Futureintech on the West Coast

Futureintech staff are travelling to the West Coast in early September to meet with local IPENZ Members, teachers, young engineers and technologists, and to run a training day for potential Futureintech Ambassadors.

If you would like to be involved please contact us via our website [www.futureintech.org.nz](http://www.futureintech.org.nz) or 04 473 2023 [enquiries@futureintech.org.nz](mailto:enquiries@futureintech.org.nz)



**Leticia Dodson** has joined us as Subeditor for our publications team. She is an engineer with six years experience both in New Zealand and overseas – so has a good understanding of what our readers are looking for.

Wanting a change from engineering, Leticia is excited about her role with IPENZ where she can combine her engineering knowledge and flair for writing, and is looking forward to contributing to the ongoing success of *e.nz magazine*, and

other publications.

Leticia has recently returned from three years overseas, most recently from South America looking after baby monkeys in the Amazon jungle. Besides travel, Leticia enjoys cooking, wine and company (in any order), netball, yoga and has recently made her stage debut in a play. Leticia hates sanding – which is another role she undertakes as she and her husband strive to finish doing up their house.



Welcome **Dionne Needham** who joins us as Secretary/DTP whilst Susan Levick is on maternity leave. She takes over the duties of secretarial support to the Deputy Chief Executive John Gardiner, and DTP and admin support for the publications team, as well as administration for the P4 team. Dionne says she is excited about her role at IPENZ because it’s a great mix – allowing her to use her creative and organisational skills with a variety of tasks, making each day different.

Dionne’s previous work history has been in graphic design, with two and a half years work experience in Whangarei – not far from the Bay of Islands where she was born.

Recently returned from five months overseas, Dionne spent three months in Virginia as a Counsellor at summer camp and two months travelling through the States and Canada. Since arriving in Wellington, she has had various temporary assignments with different companies and says she is enjoying the city as there is always something interesting happening.

Apart from work, Dionne enjoys reading, movies, travel and arts and crafts, with her latest project being a scrap book of her trip to the US and Canada.

We welcome both Leticia and Dionne to IPENZ, where they are both already making a valuable contribution to the team. ☺

## Introducing a Second Retired Membership Status

The definition of “retired” status requires that the Member concerned is receiving minimal income (other than from superannuation, dividends etc.), and is not actively engaged in employment on an ongoing basis. An allowance of up to \$4000 per year is made for small amounts of consulting or other professional activity.

Additionally, the Member is required to have completed 25 years service as an IPENZ Member. In return they receive the benefit of a subsidised subscription rate (about \$110.00 + GST for MIPENZ, slightly more for FIPENZ). However, staff occasionally deal with retiring individuals who express frustration that there is no suitable subscription rate for them after 10-15 years of Membership.

At the July 2004 Board meeting, it was agreed that there was a case for any genuinely retired person, not yet having 25 years Membership, to receive a retired

rebate based on the full cost of services that a retired Member receives. On moving to 25 years service they could then access the subsidised retired rebate. It is envisaged that this full-cost retired status would enable many Members, who presently have no avenue to remain in the Membership on retirement, a chance to remain with us.

The rebate for the full-cost retired status has been set so the Member will only pay the cost of relevant services (about \$195 + GST). Members who are eligible will be able to apply from 1 October 2004.

There is no net income benefit to IPENZ from the proposal – the new retired status is offered as a service to a sector of our Membership who might otherwise need to disengage, giving us the opportunity to retain these Members who previously would have resigned on retirement. ☺

# Comparing Strategy with the Institution of Engineers Ireland

In June 2004, IPENZ representatives visited the Institution of Engineers Ireland (IEI) with the purpose of investigating their strategy to see if there were things we could learn for our own.

IEI is probably the most similar engineering Institution to IPENZ, and like us, are the registering authority for engineers under an Act of Parliament. They also operate in a similar manner with membership classes similar to our own, being mostly subscription-funded, governed by an Executive Committee, making submissions on policy issues, and providing professional development support to their members.

However, whilst Ireland has a similar population base to NZ, approximately 60,000 people classify themselves as engineers compared to 30,000 in NZ's most recent Census. IEI membership is also roughly double our size indicating our membership penetration rates are similar.

Although larger than IPENZ in terms of membership, we found IEI face similar issues both within the profession and as a professional body.

## Profiling of the Engineering Profession

IEI have concerns about the poor understanding and public perception of the engineering profession in the wider community - sound familiar? They have recently commissioned market research to investigate their needs for profiling of the profession and the results show many of the same issues that we have encountered in NZ. They have provided us with their results and we will use them in our marketing plan development that is presently underway.

## Engineering Practice

The IEI engineering practice programme is currently less developed than IPENZ. They have modest involvement in codification of knowledge, and do not seem to submit in detail on proposed government legislation and regulations as we do. They have been reviewing their role in the provision of engineering knowledge and have decided that like IPENZ, they are not the leading provider of knowledge to

Members, but are undecided of what their future role should be if they change tack.

## CPD Accreditation Scheme

IEI has a well-developed CPD accreditation scheme for employers, with similarities and differences to emerging IPENZ strategy in this area. The IEI programme is aimed at mid-career engineers, whereas we have developed our Endorsed Employer scheme for recent graduates first, and are only now looking at employer accreditation for mid-career Members. IPENZ staff members will be following this up to see if we can further share experiences in this area.

## Engineering Education

IPENZ and IEI are both parties to international agreements regarding competence assessment. We had a useful discussion on training of accreditation panels as we move towards outcomes-based accreditations, and also discussed trends in engineering education in Europe.

IPENZ has recently commenced preparing a strategic overview of engineering education for submission to the government. The interaction with IEI has provided us with some very useful pointers to assist in this work.

## Membership Recruitment

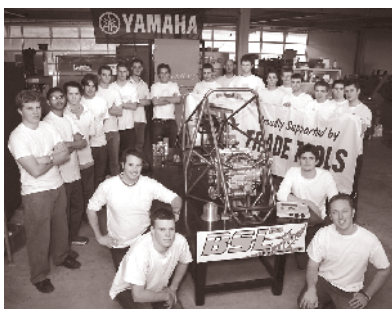
Over the last five years IEI paying membership has grown by about 1200 (10%), while IPENZ has grown by about 450 in the last three years (6.4%). Given that they have had the advantage of about 8% economic growth over the last five years, our Membership growth rate is at least equivalent, if not better, than theirs.

## IPENZ Strategy Confirmed

Overall, visiting IEI proved a knowledge-sharing experience and gave us confidence that our own strategy is on-track. Their relatively slow membership growth in a rapidly growing economy also suggests that we are growing our Membership at a reasonable rate.

IPENZ will keep in close contact with IEI to facilitate further sharing of ideas to advance our strategies. ☺

# Engineering students plan to uphold kiwi motor sport tradition



New Zealand's proud tradition in motor sport has been given a youthful boost by a team of engineering students from The University of Auckland.

A team from the University's Faculty of Engineering will take on the world's best at the Australian Formula SAE competition held in Melbourne in December.

Formula SAE is a year-long competition which involves university teams throughout the world designing and constructing a formula style race car. The Auckland team is the first and only New Zealand team to compete in the event, which attracts teams from Australia, America, Japan and Europe.

The competition requires teams to design and produce a prototype race car costing no more than \$50,000 Australian dollars.

The students have already mapped out the design, drawing on knowledge already gained for their Mechanical and Mechatronics engineering degrees

together with expertise of members of the New Zealand motorsport community. The construction phase of the car has recently begun in the team's new Tamaki campus workshop.

Faculty of Engineering Dean Professor Peter Brothers says the team's entry in the event is a significant achievement.

"The University is behind the students all the way and we would like to encourage engineering and motor industry members to share their expertise and support the students as well," says Professor Brothers.

Team Manager and final year mechanical engineering student Chris Paykel says the team has been working hard to meet tight production and budgetary deadlines.

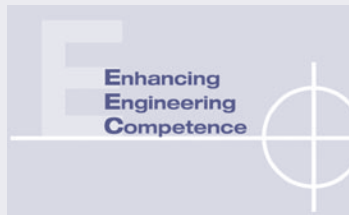
"It's a test of true kiwi ingenuity and will also set us up well for our future engineering careers," says Chris.

As part of their final year projects for the Bachelor of Engineering degree, many members of the Auckland team are researching cutting edge motorsport technology to build a knowledge base and advance New Zealand's high technology racing development. Projects include composite materials for chassis and suspension design, aerodynamics, onboard data acquisition, and engine development. ☺

## Board Highlights – 27 July 2004

- It was noted that for the 2003/2004 financial year the Institution will have an income of about \$4.7m, total spending of about \$4.5m, with an expected end of year reserve position comprising: about \$1.8m attributable to National Office; \$150,000 as accumulated Branch reserves; and \$500,000 Technical and Special Interest group reserves.
- The 2004/2005 budget was approved – the expected income is \$5.2m and the expenditure is budgeted to break even.
- It was agreed to maintain subscription fees at their present level for a further year (this is the second year in which no changes have been made), but the continuing phase-out of some dual professional body Membership rebates was reaffirmed.
- An alternative retired-Member rebate was introduced. (See article page 6)
- Following the request of the UK Association/Branch, UK-based Members will have an adjustment to their subscription to fund UK Branch activities.
- It was agreed that a review of all CPEng fees and subscriptions be carried out early in 2005 to ensure that cross-subsidisation is minimised.
- Continuing investment in underpinning capability such as enhanced database services and a rolling programme of equipment updating were approved as part of the capital programme.
- Increased investment in public policy work to increase the visibility of the profession was approved, as was extra capacity to increase our web capability as we seek to bring more payments on-line.
- The appointment of a Branch facilitator – a staff member dedicated to assisting Branches run better programmes, was approved for a two-year trial.
- A report from a working group on simplification of the Institution Vision and Mission statements and Strategic Goals was received – a fuller report will be published later this year.
- The considerable resource requirements to fund the investigation and determination of complaints was noted – there are presently three matters at the Investigating Committee stage and one at Disciplinary/Appeals Committee stage.
- It was noted that there would be wide consultation on proposed changes to the procedures for hearing complaints commencing in September in relation to both CPEng and IPENZ complaints.
- It was noted that the necessary legal steps to close the Benevolent Society and transfer the assets to the Foundation should be complete within the next two months.
- Changes to the approach of the Institution towards engineering knowledge were approved. (See article pages 4 & 5)
- Changes to the Institution Awards programme were approved. (See article page 1)
- Progress on the Engineers as Leaders programme initiated by President Ian Parton was reviewed, and it was noted that after IPENZ attends the Australian Centre for Engineering Leadership and Management conference in September, progression of the initiative into concrete work programmes would be further developed.

## Coming Events



### Leading and Managing Engineers

Participants will learn how to effectively handle their dual leader/manager role.

Location	Date
Wellington	24–25 August
Dunedin	15–16 September
Taupo	21–22 September

### Finance for Engineers and Technical Professionals

This course will improve the understanding of 'accountability' and assist in communicating with Accountants.

Location	Date
Whangarei	6–7 September
Taupo	8–9 November
Dunedin	15–16 November

### Environmental Legislation for Engineers

This course is designed to provide Engineers with the tools and information they will need when applying for consents or acting on behalf of clients or employers at consent hearings or the environment court.

Location	Date
Auckland	9–10 September
Christchurch	13–14 October
Wellington	17–18 November

### Ethics for Professional Engineers

This course will discuss the provisions contained in the IPENZ Code of Ethics and CPEng Rules, as well as numerous legal statutes and IPENZ disciplinary regulations and processes.

Location	Date
New Plymouth	13–14 September
Napier	30 September – 1 October

These courses are part of the EEC Programme. For more information:

<http://www.ipenz.org.nz/ipenz/nzecal/>  
CPD@ipenz.org.nz or Ph 04 474 8982



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