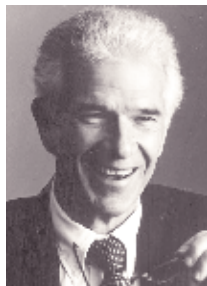


President's Message



2005 – The Year Ahead

IPENZ is gearing up for another busy year with the main public events being Convention (and the Awards dinner) in March, and the launch of the National Awards programme in November. While Convention will continue to be Membership orientated, the inaugural National Awards will highlight the work of engineers and the contribution we make to society – raising the profile of engineers in the general community.

Recent changes to the IPENZ Rules, the Code of Ethics, Disciplinary Regulations and CPEng Rules will also take effect in 2005. These changes were highlighted in the December issue and I urge you to familiarise yourself with them. We will also be dealing with the Building Act 2004 and the Licensed Building Practitioners regime, both of which will have a major impact on building works.

The Boxing Day tsunamis in Asia were a major catastrophe. The effects of the disaster will continue to be revealed and it is unlikely that the true cost of the relief and rehabilitation efforts will be known for some years. Following the tsunami, numerous Members contacted National Office wishing to do something independently. However after dialogue with aid agencies and the government, we felt that a coordinated response would be more effective. In a special address to Members in early January I recommended that Members wishing to assist in disaster relief should contact the Register of Engineers for Disaster Relief (RedRNZ).

Indeed, IPENZ Membership covers an extensive cross-section of engineering expertise which will be of invaluable practical assistance over the long rebuild period. For further details on how best to assist with the relief efforts, and a RedRNZ update, please refer to the article *Tsunami Relief Efforts* on page 2.

With the recent tragedy fresh in their minds, it is unlikely that tsunami event planning will escape the attention of our rule-makers this year, so we can expect to see more rule making activity relating to building and development on the foreshore in New Zealand.

In my December column I urged Members to consider standing for the three available Board positions. Eight nominations have been received which means there will be an election for these positions. No election is required for the Senior Office Bearer positions (President, Vice President, Deputy President) as only one nomination was received for each position. Voting papers have been distributed with this issue so please make sure you vote!

Convention this year will be held 16–18 March at the Waipuna Hotel & Conference Centre in Auckland. It will celebrate "Engineers as Leaders" supported by an interesting technical programme including Engineering the Built Environment, Building and Construction, Emerging Technologies and Engineering Materials. Convention is the major opportunity of the year for Members to meet, discuss matters affecting the profession and to welcome in your new President. So please diary this event now and be sure to attend.

One observation I would make in looking towards 2005 is that we have greatly improved our identification of issues, our planning and our implementation. We can therefore look forward to identifying issues quickly and dealing with them more

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IPENZ Neighbourhood Engineers Award 2004



Image courtesy of Fiona Goodall from the *Western Leader*

Students at Blockhouse Bay Primary School in Auckland are getting a new playground, thanks to IPENZ's Neighbourhood Engineers Award.

The first prize of \$2000 means work can start this year on the playground, which was designed by a group of students with the help of local environmental engineer Sanjesh Lal, MIPENZ.

Teacher Victoria Calendino, in charge of the school's environmental group "Kawakawa Kids", leapt at the chance to enter the Neighbourhood Engineers Award because "you can never have enough adults in the room when you're trying to undertake a project with children".

However it wasn't until the school enlisted the help of Sanjesh from Opus International that the students finally agreed upon a project.

Working to a plan

"I initially had no idea what 'type' of project I would initiate that would keep 8–10 year olds interested," says Sanjesh. Some initial ideas included worm farms, school safety audits or footpaths, but none seemed to really capture the kids' interest. Finally a proposal was made by the deputy principal to design a new school playground. "The kids were ecstatic, drooling at the thoughts of racing tracks, play station studios, flying foxes and arcade games, but alas, the issue of constraints needed to be explained."

Sanjesh's role was to show the students, piece by piece, how to work through a major project. Once the issues of need, resources, safety and budget were explained the kids quickly returned to reality. Great ideas began to flow. Brainstorming sessions identified items that the school would like, and a room by room vote was undertaken. The results were rated in a matrix and impractical and expensive items were deleted.

The project then flowed on from concept design to details including location, access, budget and the creation of the grand concept plan. Along the way Sanjesh helped the students plan their time, construct a chart of the pros and cons of different ideas, and eventually put together an overall plan and map for the new playground.

A humbling experience

For Sanjesh the work was enormously rewarding. He has two children at Blockhouse Bay Primary and has always had a keen interest in IPENZ activities in the community. When the opportunity arose, he leapt at the chance.

"Quite often in engineering practice, not enough consideration is given to the end users. Consultation is thought to be a means to an end, a necessary evil. However children can be intelligent enough to consider access for a handicapped student, even considerate enough to design playground seats so that a wheelchair can park alongside and the disabled child can sit beside her friends! This was a very humbling experience for me."

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effectively and efficiently. This process has been facilitated by a number of factors which include;

- a more proactive position by our staff on public policy issues, keeping abreast of issues through liaison with politicians and officials
- consistency in theme and direction between Presidents, which provides continuity in direction and effort for staff
- an annual, structured, strategic planning workshop at which major items of strategy are formulated and goals are established
- integration of these into coordinated staff and volunteer workplans and performance objectives which are monitored by the Board

As you will know, IPENZ has an established professional development short course programme meeting development needs for Members where it is perceived specific learning and development needs are not being met. I have begun working with Sharon Wagg, Knowledge Services Manager, to ensure that the development needs of engineers in both leadership and governance are being met, and the relevant competencies documented. In 2005 courses on leadership will be presented to support and continue my presidential theme of "Engineers as Leaders".

2005 will obviously be a busy year for our Board, our staff and for me. I look forward to engaging with all Members of the Institution in the near future.

Ian Parton
President

Tsunami Relief Efforts

Following the Indian Ocean Tsunami, National Office received numerous enquiries from Members offering technical assistance for relief efforts. IPENZ contacted the Department of the Prime Minister and Cabinet and a number of disaster relief organisations to ascertain how best IPENZ Members could respond.

In an email to Members, Dr Ian Parton recommended that a coordinated approach was best and that engineers wishing to assist should contact the Register of Engineers for Disaster Relief New Zealand (RedRNZ). He suggested that organisations that employ our Members may also wish to contact RedRNZ to offer technical support to Members while they are on assignment.

When we spoke with the Director of RedRNZ, Neil Mander, he emphasised the need for a sustained relief effort. Although the tsunami may only make "headline news" for a short time, rehabilitation and reconstruction will require perhaps years of relief works, and it is here that IPENZ Members can be most effective. As part of the RedRNZ process, relief engineers must complete a training course to ensure they are well prepared for their task. Mr Mander encouraged Members wishing to offer assistance to visit the RedRNZ website and go through the application process now so they may attend training and be ready for assignment over the coming months.

The next training course Essentials of Humanitarian Practice runs in Auckland 6–11 March 2005 and there is a discount for IPENZ Members. Those Members who wish to register should visit the RedRNZ website www.redrnz.org.nz

RedRNZ provides the technical expertise in response to requests from New Zealand and international front-line humanitarian agencies like OXFAM, UNESCO and UN organisations but is not operational in its own right. Currently RedRNZ have provided five engineers to South East Asia for tsunami aid work. Most are civil engineers working on the basic infrastructure; water and sanitation, roads, bridges and buildings, though engineers with logistics expertise, project management, acquisition and distribution experience are also in demand.

Government agencies are currently working through United Nations agencies to develop a long-term relief fund strategy. IPENZ will continue to keep you updated and hope to bring you news of IPENZ Members currently on tsunami disaster relief assignments in the May/June issue of *e.nz magazine*.

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Promoting engineering in the community

The IPENZ Neighbourhood Engineers Award is one of three key classroom activities promoted by Futureintech (the others being Bright Sparks and the CREST Awards). Sponsored by Transpower, the Award helps create greater awareness of the engineering profession and encourages innovative thinking. There are three award categories and prizes of up to \$2,000 available.

Other winners for 2004 include St Johns Hill School in Wanganui and Tararua College in Pahiatua.

Public Policy – How Does It Affect Engineers?

Public policy

Public policy can be defined as the intentions and deeds of central and local government. It may take the form of legislation such as the Construction Contracts Act, strategies such as the New Zealand Transport Strategy, plans such as District Plans and numerous other protocols and policy statements. Public policy has a bearing on everything we do, from the tax we pay to the roads that are built.

IPENZ public policy contributions

IPENZ is specifically interested in the effect public policy has on our Members in their capacity as professional engineers. Our strategic plan mandates IPENZ to benefit New Zealand by presenting the perspectives of the engineering profession and demonstrating the role of engineers in achieving national goals. Participating in the public policy process gives effect to the strategic plan, raises the profile of the profession, and brings issues of national importance to the government's attention.

IPENZ makes contributions in the following policy areas: infrastructure and energy, innovation and economic growth, environment and sustainable development, education, engineering practice environment, and technology and society. Our contributions may be reactive, such as submissions, or proactive, for example providing comment on public policy issues through Informatory Notes, Practice Notes, Reviews and Position Statements.

Member involvement

Interaction with Members throughout the process is integral to the success of the IPENZ public policy programme. While IPENZ provides information to Members on new developments, presents an engineering view to government, and responds on behalf of Members, we rely on Members to bring issues to our attention and to provide input and peer review.

Situations may arise where not all Members agree with a particular view, therefore free-flowing dialogue between Members and the Institution is essential in maintaining the integrity of our outputs. To strengthen this, IPENZ will endeavour to further develop links with Members, Branches, Technical Groups and Special Interest Groups to identify relevant public policy issues, formulate responses and develop outputs.

The policy team may request Member input through notices in IPENZ publications, emails and direct contact with Members. We appreciate your input and acknowledge the often voluntary nature of contributions. We also encourage Members to actively participate in the public policy process through both IPENZ and in an individual capacity.

IPENZ public policy programme 2005

The IPENZ public policy programme for 2005 is yet to be finalised however outputs in the early part of 2005 include submissions on the Resource Management and Electricity Legislation Amendment Bill and the government's Sustainable Energy discussion document.

For further information or to discuss any issues please contact Claudine Dupuy, Policy Advisor at policy@ipenz.org.nz or 04 474 8934. We look forward to hearing from Members with their input.

Futureintech Hits Top Gear

2005 is a big year for Futureintech as we move from start-up phase to full implementation.

Our three new facilitators have started work giving us coverage across the whole country. By the end of the year even more schools will have taken up our programmes and built meaningful connections with industry.

The ultimate aim is that more young people will have had a taste of what engineers, technologists and scientists actually do, and will have been inspired to study those areas at tertiary level.

One of the most exciting new developments for 2005 is our teaming up with the Young Designer Awards. This is New Zealand's premier national design competition for secondary schools, and offers a range of categories including Electronics, Communication, Fashion, Products, Landscape and the Built Environment.

It's the kind of programme ideally suited for Futureintech, given that it encourages practical learning, innovation and links with outside industry. Futureintech will be promoting and supporting the Young Designer Awards in schools along with other awards programmes such as CREST, Bright Sparks and the Neighbourhood Engineers Award.

Supporting the awards is one way of promoting hi-tech careers but changing attitudes and stereotypes is going to be a long-term project. In 2004 we made the first crucial steps and here are some of the highlights:

- The Futureintech website (www.futureintech.org.nz) was launched in March 2004 and has grown considerably – it now has over 60 profiles of young

people working in technology, engineering and science, and 20 profiles of the companies they work for. It's proven to be a popular site, particularly since our radio campaign in September which saw hits increase by 80%.

- Futureintech ambassadors have started making a real impact throughout New Zealand. Ambassadors are young professionals working in technology, engineering and science who have volunteered to help out in schools. In 2004 this included entries in the Neighbourhood Engineers Award, career evenings, and events around the country.

Ambassadors have a key role to play. Research indicates that students don't respond to lectures, but they do appreciate finding out exactly what different jobs involve and having a taste of them through practical projects. By working alongside schools, ambassadors will inspire students to continue with subjects like maths, science and technology.

Our success depends upon the partnerships we can build, and in that respect many of our partners have been fantastic. We now have over 25 official partners, including private companies, industry organisations and education groups.

These technology-based groups have all worked with Futureintech, either by showing leadership, influencing other organisations, hosting our facilitators, or by offering scholarships for studies in technology, engineering and science. ☺

Futureintech's New Facilitators



Margaret Brunton's

Master's thesis has given her the perfect background for Futureintech: she studied industry-school linkages, with a focus on biotechnology and rural schools.

Based in Whakamaru, just south of Tokoroa, Margaret covers the central North Island and is hoping to put her thesis into action. She is excited about the possibilities to enhance learning in technology education, and to increase awareness and enthusiasm for careers in technology.

Outside of work, Margaret's family keeps her busy and involved in various water sports.



Futureintech's new South Auckland facilitator is **Gay Watson**, another former technology teacher.

Last year Gay received a Royal Society Technology Teacher

Fellowship which let her spend a year in different workplaces studying technological practice. As well as spending time with lingerie and possum-fur clothing companies, she worked on the movie set of *The Lion, The Witch and The Wardrobe*. One of her more unusual tasks was "aging" the costumes, which meant spending hours scratching and creasing new costumes to get the desired look.

The attraction of Futureintech for Gay was the opportunity to engage kids with real-life education. In her experience as a teacher she says having outside professionals working in the classroom never failed to inspire students.



Covering the lower South Island is **Bernadette Hannagan** who is based in Dunedin. Bernadette's previous role as liaison officer for Massey University introduced her to a wide range of schools

and industry – connections that should be useful in her new role.

The chance to work on linking careers with learning was too good to pass up for Bernadette. She says she saw many young people ending up on inappropriate courses, simply through not knowing enough about the different options available. Futureintech is a chance to help correct that, particularly through showing how subjects like maths and science can open doors.

Away from work Bernadette is involved with Guides New Zealand as national training leader. ☺

IPENZ Convention 2005 – Engineers as Leaders

16 – 18 March 2005, Waipuna Hotel & Conference Centre, Auckland

Don't miss out! Register for Convention 2005 today. Visit the Convention 2005 website to obtain programme details and a registration form. www.ipenz.org.nz/convention2005

We acknowledge the support of our principal sponsor CRS



NOTICE OF ANNUAL GENERAL MEETING THE INSTITUTION OF PROFESSIONAL ENGINEERS NEW ZEALAND INCORPORATED

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

AGENDA

- | | |
|--|--|
| 1 Notice of the Meeting – confirmation | 10 Announcement of Election Results |
| 2 Apologies for Absence | 11 Vote of Thanks to Scrutineers |
| 3 Visitors | 12 Vote of Thanks to Retiring Board Members |
| 4 Obituaries | 13 Approval of 2003/2004 Annual Report and Statement of Accounts |
| 5 Honours Lists | 14 Motions of Which Prior Notice Has Been Given |
| 6 Announcement of Honorary and Distinguished Fellowship Awards | 15 Appointment of Auditor |
| 7 Confirmation of Minutes of 90th Annual General Meeting held on 25 March 2004 | 16 Vote of Thanks |
| 8 Confirmation of Minutes of Special General Meeting held on 30 November 2004 | 17 General Business |
| 9 Matters Arising | |
- Dr A C Cleland**
Chief Executive

NOTICE OF ANNUAL GENERAL MEETING THE INSTITUTION OF PROFESSIONAL ENGINEERS NEW ZEALAND PRACTICE COLLEGE

The second Annual General Meeting of The Institution of Professional Engineers New Zealand Practice College will be held in the Banquet Room, at the Waipuna Hotel & Conference Centre, 58 Waipuna Rd, Mt Wellington, Auckland on Thursday 17 March 2005, following the IPENZ Annual General Meeting.

AGENDA

- | | |
|---|--------------------|
| 1 Notice of the Meeting – confirmation | 5 General Business |
| 2 Apologies for Absence | |
| 3 Confirmation of Minutes of 1st Annual General Meeting held on 25 March 2004 | |
| 4 Presentation of Annual Report | |
- Dr A C Cleland**
Chief Executive

The dissolution of The Institution of Professional Engineers New Zealand (Benevolent Society) Incorporated has been gazetted and is expected to be completed in February 2005. If it has not been fully dissolved by 17 March 2005 an AGM of the Society will be held following the IPENZ and Practice College AGMs.

**Registered office and postal address of the Institution of Professional Engineers New Zealand:
101 Molesworth Street until 11 March 2005, thereafter 158 The Terrace, PO Box 12 241, Wellington
Email: ceo@ipenz.org.nz**

Centenary Fund Initiated

The Board has agreed to set aside funding for centenary celebrations in 2014.

The initial target is to put aside \$25,000 per year which would build up a fund of at least \$250,000 in addition to what could be made available from the 2014 annual budget. This sounds like a lot of money, but a centenary publication for every Member costing \$20 per copy would use most of it.

The first professional engineering body, the Institute of Local Government Engineers of New Zealand, was actually formed in 1912. The following year however, the New Zealand Society of Civil Engineers was formed. It was thought to be more representative of the engineering profession.

These two bodies merged in 1914 and it is this year that is regarded as the start-up of IPENZ.

The Society grew steadily over the next twenty years until 1937, when the increasing number of non-civil engineers among the Membership began to demand recognition in the form of a name change. After much debate the name was changed to the New Zealand Institution of Engineers. The present name IPENZ was adopted in 1982 to reflect the importance of the professional engineering ethos in the organisation.

There are no specific activities planned for the centenary at this early stage, but over the next few years the Heritage Committee will start planning how best to celebrate it. If Members have any ideas these can be conveyed to Megan Rodden (mrodde@ipenz.org.nz) who administers the Committee. ☺

REMINDER!

For those of you who have not yet paid your annual subscription – this is due now! A reminder will be sent to you within the next few days so please have this settled ASAP. ☺

Occupational Skill Shortage

The Department of Labour has broadened the range of professional engineers on its "Long Term Skill Shortage List" which is used for immigration purposes. Previously the list included "civil engineering" but this has now been expanded to "professional engineers" and includes roading, design, structural, mechanical, geotechnical, electronic, project, transport/traffic, fire, civil and environmental engineers.

The qualification requirements for these occupations have also been amended, and are now benchmarked against the CPEng competence standard.

These changes were facilitated in November when IPENZ received advice from the Department of Labour that the occupational lists were being updated. The Department sought clarification on a category of engineer on the list and a response was required at short notice to meet ministerial deadlines.

IPENZ sent an email to all Endorsed Employers, secretaries of Technical Groups and recruitment agencies on the IPENZ database, asking for comment on recent experiences regarding the recruitment of professional engineers.

There was a quick response from a number of parties, and we collated this information and forwarded it to the Department. Many thanks to all those who contributed to the review.

Full details of the lists are available at: <http://www.immigration.govt.nz/migrant/general/generalinformation/news/skillshortagelistreleased.htm>

IPENZ will be notified by the department when the immigration lists are next updated, so we can canvas appropriate organisations for advice on additions (or deletions) to these skill shortage categories. ☺

New Branch Facilitator



Kathryn McGavin took up the new role of Branch Facilitator at National Office on 7 February 2005.

Kathryn comes to IPENZ following a one-year study break which sees her about to complete her Master's Degree in Library and Information Systems at Victoria University. Prior to her study break, Kathryn taught history at Hutt Valley High School for eight years.

Kathryn brings a raft of skills and networks to her new position at IPENZ. Engineering is in Kathryn's family; her husband is a civil engineer and Professional Member of IPENZ and her son is currently studying electrical and computer engineering. She also has first-hand knowledge of branch committees having served for several years as the local PPTA branch chairperson.

The Branch Facilitator position to which Kathryn has been appointed was created in response to a number of Branches requesting help to enhance the effectiveness of Branch operations. Hence the objective of the role is to support office holders and Branch activities.

As we all know, Branches rely on considerable volunteer effort for their successful operation, and the creation of this position is an acknowledgement that this needs to be appropriately supported. The services and activities that Branches offer, such as professional development, information sharing and networking, are important to ongoing recruitment and retention of Members.

Consultation conducted with Branch Chairs and IPENZ staff to develop the role emphasised the different ways in which Branches operate. Not surprisingly, a range of views were expressed by Branch Chairs about the particular services that would assist them.

Feedback highlighted support for the sharing of information between Branches and National Office. Therefore, one of Kathryn's objectives is to foster inter-Branch relationships and share successful practices from different Branch programmes.

Kathryn will be based in the Learning and Assessment Team which will ensure close links with the short course Continuing Professional Development programme that is managed by Sharon Wagg and administered by Josie Nolan.

Closer links with individual Branches will enable our professional development activities to be better tailored to meet needs at the Branch level. Kathryn will also link with other staff in the Learning and Assessment team to assist in promoting the range of IPENZ Membership classes, and to identify opportunities to promote the CPEng brand with regulators at a regional level.

Kathryn will also work with other teams in National Office to obtain input from the Branches to enhance our publications, Futureintech, engineering practice and public policy initiatives.

Another key initiative that was supported by the consultation process is the provision of initial training and support for new Branch office holders. The lack of this initial support was seen as a possible barrier to people taking up positions at Branch level which has the potential to impact negatively on Branch operations.

As well as providing this induction training, Kathryn will provide ongoing mentoring and support for Branch Chairs and officeholders, and will be responsible for updating and maintaining the Branch Procedures Manual. The fact that some Branch Chairs were not aware of the manual's existence served to highlight the lack of initial support they receive!

Branches also have a key role in supporting the development of young engineers. It is important that Graduate Members, and new Members generally, are assisted to establish links with their local Branch. This will maximise the value of Membership for new Members and promote "new blood" into the Branches.

Kathryn will also be working with Branch Officers and our IT team to look at ways to ensure that current web-based services are fully utilised and aligned with Branch activities.

An important, diverse, challenging, and rewarding role? We think so! We welcome Kathryn to the IPENZ team and look forward to her contribution as the new Branch Facilitator. ☺

Engineering Submissions Workplan

While many were still enjoying their Christmas break, early January 2005 was a busy time for the IPENZ practice team with a number of submissions having a deadline of the 31st of January. To formulate our submissions we have been working closely with ACENZ to review the various discussion documents while a number of IPENZ Members and IPENZ Technical Interest Groups also assisted by providing their comments and input. Thank you to all those who contributed.

The following documents have been reviewed:

- International Fire Engineering Guidelines Part 0 – New Zealand
- Approved Document for Fire Safety Clauses
- Acceptable Solution for Clause H1 Energy Efficiency
- Assessing Alternative Solutions – Guidance Document
- Land Transport Rule – Heavy-vehicle Load Security
- New Zealand Vehicle Emissions Screening Programme

Documents currently under review include:

Building Certifier Insurance Performance Specification

Due 7 March 2005

www.building.dbh.govt.nz/e/publish/consulting-on.shtml

B1 Approved Document Structure

Due 11 February 2005

www.building.dbh.govt.nz/e/publish/consulting-on.shtml

Best Practice Procurement in Construction and Infrastructure in New Zealand

Due 11 February 2005

www.nzcic.co.nz/CIC_Procument_document_internet.pdf

Spectrum Allocations for Studio to Transmitter Links

Due 11 March 2005

www.med.govt.nz/rsm/spp/stl/index.html

If you are interested in providing an individual submission you can download documents from the websites listed above and submit your comments to the relevant organisation. However, it would be helpful if you could also forward a copy of your submission to our Practice Manager, Andrew Clark, at PracticeManager@ipenz.org.nz so we can gauge general Membership feedback to form an IPENZ submission.

As a profession, it is in our best interests to be actively involved in the development of engineering guidelines and specifications, firstly by participating in the initial development and then in the review process. Only by our active involvement can we ensure comprehensive standards are adopted in practice. ☺

Happenings in International Mobility

It is said that only about 30% of US citizens hold passports, and that even in the US Senate the figure is not much different, but virtually every New Zealand engineer holds a passport and will work overseas for a significant part of their career. This makes international recognition of our qualifications and competence quality marks more important to our Members than it is for any equivalent body overseas.

Chief Executive, Dr Andrew Cleland explains past international mobility issues and looks ahead at what 2005 will bring.

Washington Accord

This agreement commenced in 1988 with seven partners: UK, Ireland, USA, Canada, Hong Kong, Australia and New Zealand. South Africa was added during the 1990s and in 2001 Japan joined as a provisional member. 2003 saw Singapore, Malaysia and Germany become provisional members and in 2005 applications are expected from Korea, Taiwan, India and Bangladesh.

The Washington Accord gives real benefits for engineers with an IPENZ-accredited four-year BE Degree post-1988 as holders of this qualification are immediately recognised in other member countries. Furthermore Members can claim equivalence in their own direct dealings with employers.

In some Asian economies the registration or licensing systems are run separately from the accreditation system by quite different agencies. It is likely that these Asian economies may not be able to offer IPENZ Members the same benefits as the older member countries. In these countries the purpose of seeking Washington Accord membership has been more for international benchmarking than to assist in engineer mobility. We will have to wait and see what emerges in terms of benefits.

Ireland, the UK and Germany all have European Community obligations for restructuring their education systems to support student mobility through their degrees. The new basis for qualifications in Europe is a 3+2 model – a so-called first cycle degree of three years (eg a degree in engineering science) followed by a two-year second cycle programme (eg a Master's in engineering practice). Neither the British or Irish programmes currently conform to this model but the German programme is well on the way. Recognition for New Zealand trained engineers will depend on how the Washington Accord and European systems are managed over the next five years.

We will report on further progress after the June 2005 meetings in Hong Kong.

Sydney Accord

This agreement, signed in 2001, involves seven of the eight existing Washington Accord members (the USA has not joined). New Zealand registered engineers with three-year BEngTech Degrees can now get their qualifications recognised as equivalent to local qualifications in other countries.

As few countries (other than Canada, South Africa and the UK) have particularly well developed registration or other recognition systems for engineering technologists, the benefits in applying for registration in other jurisdictions are still small, and are likely to remain so. We do not expect much change in this agreement over the next two to five years.

Dublin Accord

IPENZ has delayed its application to the Dublin Accord which gives mutual recognition of two-year Diplomas in Engineering (engineering technician qualifications) until 2007. There is still much fluidity in the education sector regarding the design and delivery of diploma qualifications in the civil, mechanical, electrical and electronic/information fields. Hence we have yet to attempt accreditation in New Zealand and it is too early to mount a credible case for membership.

APEC Engineer/Engineers Mobility Forum

These two agreements have effectively the same criteria and membership. By

a quirk of history the APEC Engineer agreement was set up first, and has the following members: New Zealand, Australia, USA, Canada, Japan, Korea, Philippines, Malaysia, Thailand, Indonesia, Hong Kong. Membership to the EMF agreement differs only in that it includes South Africa, UK and Ireland, but not Thailand as yet. Under these agreements applicants meeting an internationally-benchmarked competence level are listed in an International Professional Engineers register (IntPE register).

Countries with membership to these agreements have agreed to "minimise the further assessment of any registrant applying for registration/licensing in their jurisdiction". Registrants can market themselves as having an internationally-benchmarked competence quality mark when applying to other jurisdictions, but it is too early to give a definitive answer on the real benefit they will obtain. The early evidence is that this is useful in quickly establishing one's credentials in marketing sense. If any registrant strikes trouble they should first refer back to the IPENZ website to obtain proof that they are on the IntPE register.

In June 2005 India and Bangladesh will gain provisional membership of the EMF and there may be new applicants for APEC as well. Mexico and Chile have systems more European than English in design so there will be interesting challenges when they seek to join.

We are expecting membership to broaden outside Europe over the next two to five years, but the guaranteeing of credit in other jurisdictions will take some time. Engineers will need to continue to be their own advocates.

Engineering Technologist Mobility Forum

There is a Memorandum of Understanding in place to build an international registration system similar to IntPE, but no concrete actions are envisaged for some time.

Levels of Commitment in Other Countries

One of the most interesting aspects of the international scene is the level of commitment by Governments in other countries. Governments have realised that in an increasingly global economy key professions like engineering must demonstrably operate to international standards. In Japan and Taiwan the governments supported the development of accreditation systems by paying for international mentors to be brought in to assist. The Chair of our Standards and Accreditation Board, Basil Wakelin travelled to Taiwan, Japan and Singapore during 2004 at their expense.

Perhaps the most remarkable event was a symposium held in Japan in early December 2004. The Japan Accreditation Board for Engineering Education flew in 300 engineering academics and a dozen international design component experts from four countries, including IPENZ CEO Andrew Cleland, to work on changing the Japanese engineering design education system so it would conform to the international norm.

In most of these countries the government support is for start-up, and then the accreditation system is expected to be self-funding through the collection of accreditation fees.

Challenges for IPENZ

Through the efforts of the Board and senior staff, IPENZ is in good shape going into the June 2005 International Engineering Meetings. We are about to go through an APEC Engineer review by Japan and The Philippines as a practise for the real review process. An interim review report has been submitted for appraisal by other Washington Accord signatories. We will continue our commitment to mentoring other countries and to developing new policies for the Agreements. Our approach is that to get the best result for New Zealand educated and trained engineers we need to be on the front foot and involved in policy development. This has a greater cost than just responding, but our view is that we can achieve influence beyond our size if we are an instigator of improvement. ☺



Archibald Gordon Bogle Dist. FIPENZ

10 May 1914 – 13 January 2005

One of New Zealand's outstanding engineering academics, Emeritus Professor Archibald Gordon Bogle, has died aged 90.

Gordon was promoted to Distinguished Fellow of IPENZ in March 2004 for his outstanding leadership in the engineering profession and contribution to

technology education. He was also a Past President of NZIE (the predecessor of IPENZ) and will particularly be remembered for helping to establish Auckland University's Department of Electrical Engineering – now the largest in the country.

Born in Wanganui in 1914 Gordon was educated at Wanganui Collegiate and later at Victoria and Canterbury Universities where he completed a BE in Electrical Engineering in 1935 and the requirements for a BE in Mechanical Engineering in 1936. He won a Rhodes Scholarship and was accepted at Oriol College Oxford late in 1937 where he worked towards a PhD. His study was put aside in World War II when his supervisor rejoined the Admiralty and enlisted him too.

Throughout World War II Gordon worked on radar aids to navigation and other applications. After the war Gordon returned to New Zealand with his English wife Helen and their two children, taking up the position of chief electrical engineer at Dominion Physical Laboratories (pre-DSIR). Shortly afterwards Gordon was promoted to director.

In 1953 he accepted the invitation to become the first Professor and Head of the Department of Electrical Engineering at Auckland University (then Ardmore) and was later made Dean.

Auckland University's Professor John Boys, Dist. FIPENZ, said though Gordon's analytical mind proved intimidating to some students and he never accepted second best, former students recalled a fine teacher who was patient with those struggling to master a topic. Professor Boys remembers Gordon as an educated man in the fullest sense – keenly interested in a wide range of matters, with a wonderful sense of humour and ready wit.

Gordon is survived by his daughter, his five sons and nine grandchildren. 

Thanks to Professor John Boys for information supplied.

Last Visit for HMNZS Canterbury



Lt Gray with IPENZ staff

In December last year IPENZ staff were treated to a tour of the HMNZS Canterbury on the frigate's final visit to Wellington. The Canterbury is the last of the New Zealand Navy's steam-driven frigates and will be retired in April 2005. The Canterbury's Marine Engineering Officer, Lieutenant Commander Paul Gray GIPENZ, hosted the tour.

Responsible for, as he puts it, "the hotel services" for her 250 crew, Lt Gray and his team of sixty-odd technicians are charged with keeping everything moving and floating – from heating to ventilation to desalination for water, onboard sewerage treatment and of course the steam turbines.

Life below decks, and the heat and noise from the boilers would put many land lubbers off but despite the cramped conditions Lt Gray believes his is the ultimate job. "I joined the Navy straight from Rotorua Boys' High School. They put me through my NZCE and I was straight onto ships and into practical work experience."

Through doing the shorter NZCE course, Lt Gray believes he was in the right place at the right time, gaining practical work experience early, having service abroad and working his way up through the ranks. Now an officer, Lt Gray is completing his BE.


Lt Gray lead IPENZ staff up and down the rabbit warren of hatches and ladders visiting the five decks below including living quarters, control and operations rooms, captain's quarters, the bridge and the turbines.

The steam turbines operate on a closed system where desalinated seawater is superheated by two diesel-powered boilers. The "dry" steam then drives the 2 x 15000hp turbines and is collected, cooled via a seawater heat exchanger, separated and recycled. Although the technology dates back to the 1950's, the Canterbury's twin shaft propellers can still crank out around 30 knots (55 km/h).


The tour also included the bunkrooms and kitchens. With 250 crew, eating is in shifts, and in the cramped sleeping quarters, bunks convert to seats – "every piece of real estate must be used for something".

The Canterbury is a Leander Class Frigate, and was commissioned in 1971 as a tactical anti-submarine ship. Although now the oldest frigate in the Navy, several refits have meant the Canterbury has both a tactical and weapon fit-out that is right up-to-date.

The Canterbury's Phalanx Close-In Weapon fires 3000 rounds per minute, she is equipped with torpedos, and a refit in 1998 included changes to accommodate the Navy's new Kaman Seasprite helicopter. However most of the Canterbury's recent service has been as a training vessel and her decommissioning in April will leave a significant gap in the Navy's training programme.

The HMNZS Canterbury will be farewelled with a celebratory ball in her home port of Lyttelton. Although Lt Gray says he will miss the Canterbury, he is enormously proud to be "the last marine engineer on the last steam-driven frigate in the New Zealand Navy." 

Moved house or changed job?

Have you changed your address lately and not let us know? Keep us up-to-date so we can keep *you* up-to-date with news from Head Office and you local Branch. To update your contact information please email Bub Konia at bub@ipenz.org.nz or phone 04 473 9444. 



IPENZ Professional Development Opportunities

February – March 2005

We are starting off the year with three courses which have had excellent feedback from previous participants, so consider your professional development needs for the early part of 2005 and register your interest now!

Finance for Engineers and Technical Professionals

Location: Christchurch
Date: 23–24 February

This two-day course will cover financial accounting, management accounting and financial management tools. The purpose is not to make you into an accountant, but to introduce you to the tools that will help you understand the numbers better and improve your financial decision-making. It will also improve the understanding of "accountability" and assist in communicating with accountants.

"I have evolved from technical to management without training in finance. This is the ideal course that I have been searching for, directed at non-accountants."

Environmental Law

Location: Nelson
Date: 28 February – 1 March
Location: Taupo
Date: 8–9 March

The course will cover the basics of the law as well as the role of engineers in the process. It is intended that the course will be as practical as possible and therefore existing case law will be reviewed along with consent hearings and Environmental Court role play. This course is suitable for those engineers who have had little involvement with the Resource Management Act and are looking to obtain a deeper understanding of New Zealand's environmental legislation.

"Very good and sound and caters for engineers with various experiences in environmental law."

Professional Communication for Engineers

Location: Auckland
Date: 10–11 March

Do you wish to enhance your competitive advantage? This successful two-day course covers Effective Report Writing and Professional Presentations. You may register for one or both days.

Comments from previous participants are:

"Really appreciated the opportunity to give two presentations. Before and after clearly illustrated."

"I thought I knew everything there was to know about report writing until I went on this course." (Senior group leader, major engineering consultancy)

Effective Report Writing

By the end of the day techniques will have been given to:

- structure documents with a logical flow of information that meets the needs of all readers
- write concise text with clear main points
- write well structured and supported Executive Summary, Conclusions and Recommendations sections

Effective Professional Presentations

By the end of the day participants will have competencies needed for the following situations: presenting proposals to small groups of decision-makers, both in-house and more widely; presenting the results of completed projects to fellow professionals and to lay audiences; conference presentations; presenting technical information to community groups; informing potential users of products, programmes; explaining techniques, concepts as part of a training programme.

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
		\$1,035.00 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 completed, participants may claim two hours for every one hour of course attendance on their CPD records.

All courses may be tailored to suit the needs of organisations. For full information on these courses, or to download a registration form visit www.ipenz.org.nz/ipenz/nzecal email CPD@ipenz.org.nz or call 04 474 8982.



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