

President's Message

Ethics matter



Our professional ethics will matter more as we submit to the competence assessment processes of the Chartered Professional Engineers Act. I have just finished a tour speaking to Branches around the country and, in passing, I would ask each gathering how many had read the IPENZ Code of Ethics recently – say in the last five years. The response was usually about 20%, which is low, although I suspect it might have been higher had I asked how many were aware of what was in the Code.

The point of my query was to see how many engineers were aware that our Code includes a specific fundamental ethical value regarding “sustainable management of the planet’s resources” and minimising “adverse environmental impacts” of engineering works. Whilst some might see these goals as merely aspirational, the CPEng Rules – a much more enforceable document – also require that engineers “have regard to effects on the environment”.

How else do ethics apply to competence? First, the assessment process itself requires referees to be honest in their assessment of candidates. This means that referees may have to decline to act for someone who is in their opinion not fully competent. There is no honour in easing the standards just because you find it hard to say no.

Secondly a CPEng must “not misrepresent his or her competence”. This means that, although there are no practice areas attached to the CPEng appellation, you must only work on engineering activities within your competence. This does not mean you can’t try something new or different; but you may do so only as long as you can argue that you disclosed this intention to your client and they still preferred to use you, rather than anyone else.

The CPEng Code of ethical conduct was arrived at by a different process from the present IPENZ Code. We found it impractical to convert the present IPENZ Code into a minimalist “thou must” type of code. So the CPEng Code was derived from older rule-based IPENZ Codes. However, this approach and some recent complaints have shown up some areas in the current IPENZ Code that need updating.

One of these is language. The IPENZ Code talks about an engineer’s “duties” interchangeably with “work done by you” and “all your work”. The CPEng rules use the term “engineering activities” – perhaps a more precise definition. Secondly it now appears that the issue of what constitutes competence can be separated from the moral issues of how that competence is applied to engineering activities.

It thus seemed timely to do a minor review the Code of Ethics. The Board has set up a committee for this purpose, and draft changes will be put out soon for comment. The main changes envisaged involve separating the code into three parts:

- Part I listing the five fundamental ethical values, which will change only in minor detail
- Part II giving the Guidelines, which again will stay basically the same
- Part III which lists “Minimum Standards of Acceptable Ethical Behaviour,” essentially mirroring the CPEng Code

The main danger is that Part III will be seen as all that really matters, while the aspirational parts of the code will be seen as idealistic, and not realisable or enforceable. On the other hand some Members mindful of insurance and litigation saw the present IPENZ Code as “constructing some

Continued overleaf>>>

Building Bill submissions process


As reported in a recent *engineering direct* IPENZ has hosted a meeting of engineering-based organisations who have an interest in submissions for the Building Bill. Submissions close on 31 October, leaving a very short time in which to develop submissions on a very important piece of legislation for the profession. Representatives were present from the Association of Consulting Engineers of NZ, Structural Engineering Society, Institute of Refrigeration, Heating, Air Conditioning Engineers, NZ Society on Large Dams, Society of Fire Protection Engineers, NZ Geotechnical Society, NZ Society of Earthquake Engineers, Timber Design Society, Chartered Professional Engineers Council and Engineering Associates Registration Board. Apologies were received from representatives from BRANZ, and the Energy Management Association.

The purpose of the meeting was to identify issues and develop a co-ordinated set of high quality submissions from the engineering profession. The meeting was useful, and each group came away with a clear view of where their submissions would fit into a critique of the Bill as a whole.

For example IPENZ will take the lead on licensing/registration issues, promoting the view that self-certification is the best approach. ACENZ will focus on commercial risk and liability aspects, consumer protection, warranties and bonds, pushing the concept of proportional liability. NZ Society on Large Dams will lead on dam safety issues, and treatment of suspect dams. The NZ Geotechnical Society will focus on defining natural hazards etc, risk transfer and longer-term reassessment issues.

The Society of Fire Protection Engineers is interested in clarity on defining acceptable solutions (i.e. baseline or conservative), and transparent and consistent TA processes. IRHACE and EARB are interested in the registration and licensing of building practitioners, the definition of amenity and sustainability, maintenance issues and the building Warrant of Fitness process. This list is by no means exhaustive.

It is expected that submitters will make available “first cuts” of their submissions by 17 October; they will be placed in the Member-only area of the IPENZ website for feedback.

If you’d like to contribute to the submission process please contact either Murray Isdale misdale@ipenz.org.nz or Claudine Dupuy cdupuy@ipenz.org.nz There are bound to be views that are not covered by those of the groups represented, and IPENZ will pick up some of these issues. 

<<<President's Message continued

very high ground against which lawyers can see us silhouetted against the sky". They would prefer to have a Code that says very little beyond what common law requires. Such fears seem to have proved groundless, but some caution against proclaiming engineers as would-be paragons is still probably wise, without sacrificing our values.

It has been said before that those who really *need* a Code of Ethics will not benefit from one. The vast majority of engineers will continue to be competent and ethical. A greater task perhaps is to educate the younger engineers in what it means to be ethical in today's society, where free rugby test tickets may not seem like corruption – although they can certainly soften one's opinions of the giver. Is accepting them ethical? My old firm's founder said "If you can eat it, drink it, or smoke it in a day, then it's not a bribe!" But that was 30 years ago. Is it still acceptable?

Other feedback received from Branches during my visits included overwhelming approval for the idea of IPENZ facilitating and brokering short courses for CPD. And ethics was seen to be a fruitful area for some short courses. In the end, ethics do matter; ethical conduct will lift the game of the whole profession – and make all of us proud to be Members.

Gerry Te Kapa Coates
President

What's happening at National Office

- Held two meetings of senior IPENZ Fellows regarding our public policy development processes.
- Completed end-of-financial-year processes, calculation of 2003/2004 subscriptions, and invoicing.
- First meeting of Consultation Group for AIPENZ and TIPENZ Competency Standards held on 2 September.
- Accreditation visit conducted to review the Bachelor of Engineering Technology degree offered at Massey University (Wellington).
- IPENZ Engineering Education Forum held on 30 September, with more than 60 attendees from tertiary institutions and ITOs.
- National Office staff visited 10 organisations that employ engineering professionals to gain insight into the learning needs of engineering professionals.
- Represented at Competenz (ITO) meeting to discuss the NDE (Mechanical).
- Represented at Civil Engineering Consortium Advisory Group (for Diploma in Civil Engineering) meeting.
- Review of IPENZ professional development activities and services undertaken to ensure appropriate support for Members' professional development at all stages of their career.
- Preparations begun for review of IPENZ's accreditation policies and procedures next year, in fulfilment of one of its obligations as a signatory to the Washington Accord.
- Applications for student membership continue, due to recent developments in services for student members, including a student job search facility. ☺

Hunting heritage photographs

The National Committee for Engineering Heritage is endeavouring to locate, date and name old group (usually conference) photographs of this institution. We have approached the Alexander Turnbull Library regarding the possibility of their acquiring our photos (we would have copies made for IPENZ) so that they could be cared for in a suitable archival environment.

Unfortunately these historic photographs are mostly unnamed and some are undated. While we can identify the more prominent members of the engineering profession there are a lot of unknown faces, and as the years pass the chance of anybody recognising these people diminishes.

As part of our heritage work we are trying to acknowledge the many people who contributed to engineering in New Zealand, so we are requesting help in identifying the people in these photos (see list). We would appreciate it if anyone can send us a list of names, or any other information regarding the photos. If any older or former members think they might be able to identify faces, we would like them to contact us so

that we can arrange access to a copy of the relevant photo.

Our set of group photographs from this time period is incomplete; if anyone has photos from other years (particularly named ones) or is able to access any we would like to make a copy for the IPENZ archives.

Our collection includes the following group photographs, mostly taken at conferences.

- 1912 – Wellington Local Government Engineers – named (initials/surname)
- 1912 – Institute of Local Government Engineers of New Zealand (ILGENZ)
- 1914 – ILGENZ
- 1915 – New Zealand Society of Civil Engineers (NZSCE)
- 1917 – NZSCE
- 1919 – NZSCE
- 1921 – NZSCE
- 1922 – NZSCE
- 1923 – NZSCE
- 1924 – NZSCE

- 1925 – NZSCE
- 1927 – NZSCE
- 1928 – NZSCE
- 1929 – NZSCE
- 1930 – NZSCE
- 1931 – NZSCE
- 1932 – NZSCE
- 1933 – NZSCE
- 1934 – NZSCE – named (initials/surname)
- 1935 – NZSCE
- 1936 – NZSCE
- 1938 – New Zealand Institute of Engineers (NZIE) – named (initials/surname)
- c1940 – NZIE
- 1941 – NZIE – named (surname)
- 1949 – NZIE
- 1964 – NZIE

Please contact Megan Rodden (mrodden@ipenz.org.nz) if you can supply any information about historic IPENZ photographs. ☺

Nominations are called for the following positions to take office on 25 March 2004:

President

(one-year term, must be a Fellow)

Deputy President

(one-year term, must be a Fellow)

Vice-President

(one-year term, must be a Fellow)

Three (3) Board members

(two-year term, members from any class eligible)

Nominations close on:

12 December 2003

with the Chief Executive

These roles represent a real opportunity to contribute to the profession, by guiding the strategy of the Institution. Board meetings are held six times per year, taking a little over one working day, and Board members deal with ongoing correspondence between meetings. Direct travel and other costs are reimbursed from subscription income.

Nominees for President must have served two years on the Board in the last five years, and all nominees must be fully financial. Nomination forms, and details of other requirements for nominees, such as total service limitations, are available from the Executive Assistant, Lorraine Biggs:

lbiggs@ipenz.org.nz

phone 0-4-474 8931, fax 0-4-474 8933

or by mail from:

IPENZ National Office, P O Box 12-241, Wellington.

Sustainability Committee progress

The Presidential Task Committee on Sustainability had its first meeting on 8 September and is working towards reporting back to the IPENZ Convention next March.

Members include the President Gerry Coates, Carol Boyle (Deputy Director and Senior Lecturer, International Centre for Sustainability Engineering and Research, University of Auckland), Kathy Garden (Strategic Development Director, Manukau City Council, Auckland), Andrew Macbeth (Consultant, MWH, Christchurch), Ian Shearer (Consultant, Energy Engineering Information Services Ltd, Wellington) and Nadine Wakim (Consultant, Meritec Ltd, Auckland).

The Terms of Reference for the committee have been agreed, and are:

The purpose of the task committee is to raise the consciousness of engineers in terms of applying sustainability principles in their daily work and thinking. A starting point is to accept the considerable body of knowledge already existing about the need for sustainability, and the magnitude of the problem. The committee will:

1. Order existing knowledge in a coherent but limited form, without carrying out any new research work.
2. Agree on what constitute accepted sustainability principles relevant to professional engineers' roles.
3. Look generally at engineers' present roles and assess how much they are currently using, complying with, or advancing accepted sustainability principles.
4. Review the barriers to increasing the uptake of accepted sustainability principles in engineers' day-to-day work, and in relation to their clients and employers.
5. Prepare simple guidelines, checklists or other tools that will allow engineers to weigh their daily activities against accepted sustainability principles, and improve them wherever possible.
6. Review and encourage the promulgation of positive case studies that

Board Members

President

Gerry Coates
Elected 2003/04

Deputy President

Ian Parton
Elected 2003/04

Vice President

Roly Frost
Elected 2003/04

Immediate Past President

John Webster
Elected 2003/04

Ross Major

Elected 2003-05

Sharyn Westlake

Elected 2002-04

Chris Mardon

Elected 2003-05

Rhonda Hill

Appointed 2003-05

Deane McNulty

Re-elected 2003-05

Richard Haverkamp

Elected 2002-04

Kelvin Walls

Elected 2002-04

Ralph Fouché

Appointed 2002-04

demonstrate professional engineers' affirmation of accepted sustainability principles.

7. Promulgate these findings as widely as possible.
8. Suggest where these findings can have a positive impact on the preparation of students to enter the profession and the education and training of engineers.
9. Provide a recommendation to the Board of IPENZ regarding ongoing or future work.

There was general consensus that the Committee should collate and filter current literature on sustainability principles and then determine whether and how they have been incorporated into engineering practice.

It was also agreed that *accepted sustainability principles* need to be defined and agreed upon. Carol Boyle has suggested that the Bellagio Principles for Assessment, developed in 1996 by the International Institute for Sustainable Development, could be a suitable basis for defining sustainability principles.

The IPENZ website will be used for sharing information and reporting on the Committee's progress. The committee envisages three levels of input:

- from the Committee itself, using a restricted access forum
- from a wider selected peer group
- from the entire membership, through open notification

Members who are interested in being part of the wider peer group, or who have comments on the work of the Committee, should make contact with the Committee through its secretary Claudine Dupuy cdupuy@ipenz.org.nz

CPEng uptake success

Good news – we are on target to receive 2000 applications for CPEng by the end of the first year, having received over 1500 applications to date. Such a strong uptake will give the CPEng quality mark credibility in the market place, and makes it worth investing in promoting it to clients, regulators and others with an interest in the profession.

The not-so-good news is that the sheer volume of applications has taxed our resources to the extent that we now expect some delays in processing applications. The pinchpoint is no longer administrative or related to Staff Assessors, but is the availability of Practice Area Assessors. The results we have achieved so far are due to the efforts of the 115 volunteer Practice Area Assessors who have worked hard and long – with many doing 10 or more

desktop assessments (with some up to 19!) So far 640 applications have been fully processed. There are about 480 applications under assessment, with 380 yet to be allocated to assessors. The goal is to clear these by year-end. A further 80 Practice Area Assessors have now been trained and will share some of the burden of clearing the more than 600 applications that arrived in September. To indicate the workload involved and put the figures in perspective, there were approximately 160 competence assessments carried out for the whole of last year. This year the workload is about ten times higher.

We are looking forward to 2004 when we can concentrate on carrying the brand to market, rather than so much in-house processing. ☺

New sponsors for the IPENZ Awards 2004

IPENZ is pleased to announce confirmation of two new sponsors. **Vector Ltd** is the new sponsor for the IPENZ Communication Award 2004 and **Shell New Zealand** is the new sponsor for the IPENZ Environmental Award 2004.

The IPENZ Communication Award recognises outstanding achievement by an IPENZ Member or group of Members in communicating engineering and the work of engineers to the media and/or the public.

The IPENZ Environmental Award recognises engineering work that demonstrates consideration of the environment in the design and in the way problems were solved, and makes an overall contribution to the environment and public enjoyment.

Entries for both Awards close **5pm Monday 3 November 2003**.

For further information and entry/nomination forms please visit the IPENZ website www.ipenz.org.nz/awards or contact Claudine Dupuy on (04) 474 8934 or email cdupuy@ipenz.org.nz ☺

IPENZ would like to identify a pool of Members who are interested in judging the 2004 Awards. If you would like to register your interest, please sign into the Member-only area of the website at www.ipenz.org.nz and click on "Interested in being an IPENZ Judge?"

**Do you
recognise
excellence
when you
see it?**

For further information regarding the 2004 Awards please visit the awards website at www.ipenz.org.nz/awards or contact Claudine Dupuy 0-4 474 893 4 or cdupuy@ipenz.org.nz

Beca Asia appointment

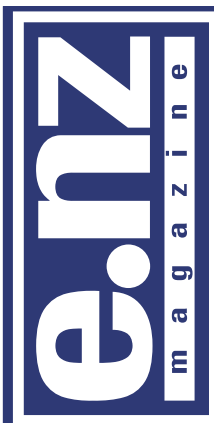


Paul White MIPENZ has been appointed Deputy CEO of Beca Asia Holdings, based in Singapore.

Paul moves to the role from his current position as Managing Director of Beca's Management Services Group at the company's head office in Auckland, where he has overseen the planning, project management, architecture and cost management arms of the company's consultancy services.

The new appointment is a key part of Beca's strategy to develop its Singapore business hub. In his new role Paul will focus on expanding market share in the buildings sector and diversifying the business into infrastructure and management services.

Paul is a qualified Civil Engineer who has specialised in the project management of commercial and infrastructure developments throughout New Zealand and Asia (such as China's Macau Tower and the Waikato Water Supply project). Since joining Beca in 1979, he has worked on projects all around the world, led teams in Auckland and Wellington and headed Beca offices in Kuala Lumpur and Jakarta. ☺



Coming up . . . in November/December issue

New Zealand on the Rails - Tranz Rail shapes up for a resurrection

Space Shuttle - the engineering story behind the Columbia's final moments, from a risk management perspective

Motoring - engineering for the Pukekohe back straight

CREST - an awards scheme that cultivates the engineers of the future

Are you excellent at what you do?

Tell us about it...

Awards 2004

Members are invited to submit entries and nominations for the IPENZ Awards 2004, which include the IPENZ Annual Awards and the IPENZ Supreme Technical Awards for Engineering Achievers. Awards will be presented at the IPENZ Awards Dinner during the IPENZ Convention 24-26 March 2004. Entry is open for the following awards:

The IPENZ Communication Award, sponsored by Vector Limited, recognises outstanding achievement by an IPENZ Member or group of Members in communicating engineering and the work of engineers to the media and the public.

The IPENZ Entrepreneurial Award, sponsored by ALSTOM New Zealand, recognises an IPENZ Member or team of Members who have created or developed a new business opportunity or a significant new business venture.

The IPENZ Environmental Award, sponsored by Shell New Zealand, recognises engineering work that demonstrates consideration of the environment in its design and the way problems

were solved, and makes an overall contribution to the environment and public enjoyment.

The IPENZ Innovation Award, sponsored by Meridian Energy Limited, recognises an IPENZ Member or team of Members who have demonstrated an ongoing commitment to innovation in engineering practice.

The IPENZ Student Design Award, sponsored by Meridian Energy Limited, recognises engineering excellence at the student level, and rewards innovation and entrepreneurial potential. It is designed to encourage students to combine and stretch their knowledge and skills in innovative and entrepreneurial ways and apply them to their design work in an enterprising context. First prize is \$2000 from a total prize pool of \$3000.

Entries for the Student Design Award close 5pm Monday 20 October 2003.

The IPENZ Young Engineer of the Year Award, sponsored by Works Infrastructure, recognises an IPENZ Member aged 35 years or younger who has made an excellent contribution as an engineer, as a leader, and/or through

community involvement. First prize is \$2000 from a total prize pool of \$3000.

The IPENZ Supreme Technical Awards for Engineering Achievers, sponsored by Opus International Consultants, recognise those who have demonstrated excellence and leadership in engineering practice over their career to the benefit of the Engineering Profession. There are eight categories: Buildings and Structures; Infrastructure; Utilities and Transport; Information and Communication Technology; Manufacturing and Mechanical; Chemical, Bioprocess and Food; Sustainability and Clean Technology; Electrical; and General (including Business, Engineering Heritage, Risk Management, Education and Research).

Entries for the Awards close on 3 November 2003.

Entry forms, including the Conditions of Entry, are available on the IPENZ website www.ipenz.org.nz/ awards or for more information or an awards brochure contact Claudine Dupuy on 04 474-8934 or email cdupuy@ipenz.org.nz.


...we're all ears.

IEEE Consultant Database

The IEEE New Zealand North Section has opened a Web database of members who are offering themselves as Consultants and Expert Witnesses for a variety of specialist requirements in the electrical, electronics and computer software disciplines.

The IEEE members listed in the database can access the latest developments in their fields through the technical publications of the IEEE, and should provide a valuable new source of consultants for IPENZ Members.

The database can be accessed through the IEEE North website (www.ieeenorth.org.nz/) by clicking on the Consultant Database link. In the Consultant Database page, a Key Phrase search or an Advanced Search using Discipline Categories can be used to locate suitable Consultants. The Consultants can then be contacted directly to negotiate a contract for services.

The IEEE (Institute of Electrical and Electronics Engineers Inc) is a non-profit technical professional association of more than 377,000 individual members in 150 countries. Through its members, the IEEE is a leading authority in technical areas ranging from computer engineering, biomedical technology and telecommunications, to electric power, aerospace and consumer electronics. The IEEE holds annually more than 300 major conferences and has nearly 900 active standards, with 700 under development. The IEEE and IPENZ have signed a Memorandum of Co-operation to encourage the exchange of information, and to promote understanding and co-operation between the members of the two institutions. 

Wellington Watch

IPENZ's policy team have been busy

- attending the Building Reference Group advising the Ministry of Economic Development on the implementation of the Building Act
- attending regular meetings of the advisory group for MoRST's i3 challenge
- attending the annual planning workshop of MoRST on future research priorities
- meeting with WINZ officials on better ways to help migrant engineers assimilate into the New Zealand workforce
- convening a meeting of engineering groups towards developing a profession-wide approach to submissions on the Building Bill



The IPENZ Benevolent Society: YES, you are a Member!

We have been reporting regularly on progress towards dissolution of the IPENZ Benevolent Society, and some members have received reminders of the need to sign and return the form, previously issued to all Members, and enclosed again with this issue of *engineering dimension*. We have received feedback that there is confusion on two issues:

1. **Who Must Act?** All Members of IPENZ other than Student Members are voting Members of the Benevolent Society. **So you need to act.** This applies whether you live in New Zealand or not.
2. **Why Vote Yes?** The Rules of the Benevolent Society limit use of its \$400,000 of accumulated funds to the relief of Members or their families in "distressed circumstances". The last two words have a very limited meaning in law, and roughly correspond to circumstances in which the social welfare system of New Zealand provides support. Therefore of recent times grants have been few, and have largely in effect topped up social welfare assistance. The Rules of the Benevolent Society are written in a convoluted way which means it is impossible to widen or modernise the purposes for which grants can be made. Therefore the IPENZ Board has undertaken three actions:
 - established a new, and modern charitable trust, the IPENZ Foundation, which can do all the Benevolent Society does, and more
 - obtained tax-exempt status for donations (which was not the case for the Benevolent Society), and started to seek contributions. The Foundation now holds about \$100,000 and is starting to make grants according to its six objectives:
 - to educate New Zealanders on the role of technology and engineering in sustainable economic, environmental and social development;
 - to encourage New Zealand school leavers into tertiary education in the fields of engineering and technology;
 - to educate New Zealanders on significant engineering and technological achievements which form part of New Zealand's national heritage;
 - to further, in New Zealand, the development and practical application of scientific knowledge in engineering or technology for the wider public good;
 - to assist, in New Zealand, Members suffering from hardship due to physical or mental sickness, disability or incapacity to participate in education or rehabilitation programmes that enable them to resume a career;
 - to promote the relief of poverty, in New Zealand, among Members or their Dependents arising from age, physical or mental sickness, disability or incapacity or death of the Member concerned.

The last of these objectives covers all that the previous Society could do, and the other objectives widen the uses to which funds may be put.

- commenced action to dissolve the Benevolent Society (requiring the written assent of 75% of its voting Membership), with the undertaking to transfer the accumulated funds to the IPENZ Foundation on dissolution.

The Board therefore seeks your support to modernise our charitable trust as outlined. If you have not already done so, please fill in both sides of the dissolution document enclosed and post it back to us. If the argument above does not convince you, you can vote against dissolution.

We want to finalise this matter as soon as possible, so please take action. If you are not sure whether you have returned a form, please return another – we will remove any duplicates.

Dr Andrew Cleland, Secretary, Benevolent Society.

MBA success for scholarship winner



Santilal Parbhu MIPENZ recently received the 2002 Best Graduate Award for students completing an APESMA MBA (Technology Management), having graduated with a distinction average. He

received the Commonwealth Bank Gold Privilege Program Prize in recognition of his achievement.


Perhaps practice makes perfect – Santilal's higher

education has been extensive. He began with a BA in French and German, and taught languages for a time before moving on to complete a BE with First Class Honours. He moved into engineering, as an employee and then in his own business from 2000.

Santilal took full advantage of the flexibility of the distance-learning MBA course, completing the degree one unit at a time over nearly eight years. Meanwhile he was also raising a family of five, including twins, and setting up and running his company, Scorpion Engineering.

Not only did this approach allow him to manage his busy family and professional life, he is adamant that it added academic value.

"I found that the self-paced programme allowed me to immerse myself in a particular field of study and explore it to practically any level. Full-time programmes can't offer this depth or learning flexibility."

Santilal also received financial help in the form of the Ian Hatfull IPENZ memorial scholarship, which he shared in 1998. The scholarship (not currently funded) was established in memory of Ian Hatfull, a young manager at Royds Consulting Ltd in Nelson who died in a plane crash while working in Laos for the company. He had completed part of an MBA at the time of his death. The scholarship was designed to encourage engineers into postgraduate management study. 

Practice Fields and Practice Areas

In the August issue of *engineering dimension* under the title of "Consistency" we discussed "practice areas" and "practice fields" and the differences between them. We are still receiving queries about the terms, so here we provide further clarification.

The term "practice area" as used in the CPEng Rules refers to something that is personally defined for each applicant. It is determined by two factors: (i) the area in which an engineer holds specialised knowledge, and (ii) the nature of the engineer's professional engineering activities. As a practitioner develops new knowledge and broadens the range of activities in which he/she engages, his/her practice area may shift – a practice area can evolve with time and require more elaborate description.

Internationally the term "practice field" is used to describe a broad range of engineering practice, in much the way that the term "discipline" is used to designate a broad specialisation within an engineering degree. Practice areas for engineers are much more specific than practice fields, as people specialise during their working life. It may take several dozen words to explain an engineer's practice area with any accuracy, and every engineer would use different words. The concept of specifying practice fields is to use a single word to indicate the broad field in which a practice area is located. For example an engineer might have a practice area involved with design and construction of anaerobic biological reactors for liquid waste treatment. The practice field in one word would be "environmental". When applying for assessment, however, he/she would tick all the appropriate boxes to help us appoint assessors – environmental (broad field), planning and design (nature of activities), waste (specialisation).

Practice areas and assessments

When an applicant applies for assessment, he/she is assessed in his/her practice area. IPENZ staff will use the information on practice fields/areas provided on the PR105 application form to assign a Practice Area Assessor who has knowledge in the same field of practice as the applicant, and preferably experience of similar activities in the same type of employment environment. Thus we would seek to match an applicant who is employed by a manufacturing company to do research and development with a Practice Area Assessor from a similar position, rather than someone from a consultancy or Government/regulatory position. Assessors would normally have the same practice field as the candidate, but the practice area of the assessor and the practice area candidate may only partly overlap. ☺

Obituary

Cyril Firth Dist.FIPENZ 1904–2003

Graham Wheeler FIPENZ is a consulting engineer who knew Cyril Firth as a lecturer, colleague, mentor and friend for some forty years. This is an abridged version of the tribute he gave at Cyril's funeral.



A measure of the regard and respect of the engineering profession for Cyril was the award in 1999 of the title

Distinguished Fellow of IPENZ. Then 95 years old,

but sprightly and as sharp as ever 25 years after retirement, he was remembered and honoured for his major contribution to engineering over a very active career.

Cyril attended Auckland University College graduating BSc.(Physics) 1928 and MSc.(Geology) with First Class Honours in 1929. He was involved with professional bodies from the very beginning and contributed generously throughout his career.

Cyril joined the NZIE as an associate member in 1929, and the Institute of Civil Engineers London. He gained New Zealand Engineering Registration in 1936. He became a Fellow of the NZIE in 1953, the ICE in 1957, and the Institute of Water Engineers (London) in 1961. He served on the Auckland Branch Committee of the NZIE for 10 years, and as a Council member and Auckland Branch Chairman 1949/50.

He was a member of various technical committees and published many technical papers, among them "The Auckland Water Supply System" which won the IPENZ Furkert Award in 1959.

Cyril lectured in engineering geology at Ardmore (1945–1965), and believed it was important for civil engineering students to be introduced early to geology, developing an understanding of how the ground may interact with civil engineering works.

I first met Cyril in 1957 when I was a student at Ardmore. The Engineering Geology lectures were timed for 7pm to 9pm on Tuesdays; he finished his day's work and then travelled to Ardmore to lecture. He had a very special way of explaining how engineering works could be influenced by the history of the ground on which they stood. He was quite hard on us – the story around Ardmore was that he didn't believe any student deserved better than a B.

During his own student days at Auckland University he worked for Gray & Gulliver as a cadet and junior engineer. There followed jobs with Manukau County Council (1929–35), and Franklin County

Council (1935–39) where he became Assistant County Engineer and introduced soil mechanics into the design process for roading projects.

Somehow he found the time to complete a Diploma in Public Administration (1934), one of the first students to graduate in this course.

In 1939 he took up the role of senior engineer-geologist with the Superior Oil Company of New Zealand Ltd. Cyril was involved in exploration and drilling operations when the US military during World War 2 undertook a crash programme in search of a secure supply of oil.

In 1943 he joined Auckland City Council's Waterworks Department, where he remained for 23 years, initially as Assistant Waterworks Engineer, then from 1953 as Chief Water Supply Engineer. He had major responsibility for the planning, design, construction, and operation of metropolitan Auckland's water supply system, including headworks and storage dams, treatment works, reservoirs, pumping stations and trunk pipelines.

In particular major rolled-fill dams were commissioned to provide bulk water storage at Nihotupu, Cossey's Creek, Upper Mangatawhiri, Wairoa, Mangatangi and Lower Huia. Nihotupu, for which Cyril was the design and resident engineer, was the first major rolled-fill dam constructed in NZ. Much credit is due to Cyril for the security of Auckland's water supply, with the capacity to handle dry spells. He developed forward plans for maintaining this high standard, initiating investigations into drawing water from the Waikato River.


In the 1960s responsibility for bulk water supply was transferred from Auckland City to the newly founded Auckland Regional Authority, and Cyril negotiated new water supply contracts with local councils.

From 1966 until his retirement from full-time employment in 1970, Cyril was the ARA's inaugural Director of Works and Head of Works Division, responsible for bulk water supply, main drainage and regional roads for the Auckland Metropolitan area.

Shortly after his retirement he was involved for several years, through Kingston Reynolds Thom & Allardice, in appraisal missions for the Asian Development Bank on water supply projects. I believe the ADB appreciated his vast knowledge and talents, for there was a steady stream of assignments throughout Asia.

And then in 1973–76 I had the pleasure of working again with Cyril on the KRTA/Binnie team that undertook detailed studies on the Waikato River project for the ARA. He advised on engineering geology and his contribution on this Auckland water supply system expansion was a fitting way to complete his career. ☺

Board Highlights 7 October 2003

- Approved revised budget for 2003/2004 taking into account contracts recently signed; revised to just over \$5.0m expenditure and \$4.9m income; the Chief Executive requested to make savings by running projects within their budget allocations.
- Noted that subscription-paying Membership grew by about 2% in 2002/03, whereas other similar institutions worldwide suffered membership loss.
- Approved a co-operation agreement with the IEE and the IEEE to run activities under the "3ei" brand in New Zealand.
- Approved formation of the Immigrant Engineers Special Interest Group.
- Approved minor revisions to the Practice College rules, adding four further practice fields to the list, and clarifying the difference between a practice area and a practice field (see page 07 for more detail). These revisions came into effect on 7 October 2003.
- Reviewed procedures for Awards and agreed to explore with other interested bodies the possibility of a unified national engineering awards system.
- Agreed to an operating agreement with the IPENZ Foundation, which formalises arrangements already in place.
- Agreed to proceed towards sale of the two floors owned by the Institution in Molesworth House as they are no longer big enough to house the Institution's staff.
- Noted that the 1500 CPEng applications received to the end of September 2003 are in line with the expected total registration of 3000 by end of 2004, and that the bottleneck in processing them has been relieved to some extent by training more volunteer practice area assessors.
- Noted that the 2002/2003 end-of-year financial predictions (to 30 September 2003) are for income close to the projected \$3.4m, and a likely expenditure of \$3.2-3.3m, with a small operating surplus for the year.
- Approved a more fully developed outcomes-based format for the 2003 annual report to the Membership.
- Noted progress towards an expanded programme of "leadership on national and community issues", including the appointment of a communications adviser to commence in November 2003. 

Coming Events

Information Management Summit 2003

Find out how to use information auditing as a tool for identifying areas of weakness in your organisation and then improving them.

When: 29 and 30 October 2003

Where: The Duxton Hotel, Wellington

Cost: \$1895 + GST

Contact: register@brightstar.co.nz

Promotional Strategies for Engineers in the Commercial Marketplace

This course will provide an understanding to a promotional process which can be applied to any engineering consulting business (or engineering manufacturing or supply business) with a view to increase billing and revenue.

When: 11 November 2003 – Hamilton
12 November 2003 – New Plymouth
14 November 2003 – Dunedin

Cost: \$395 + GST for IPENZ Members
\$495 + GST for Non-Members

Contact: CPD@ipenz.org.nz

Effective Business Writing

The course has been designed for professionals whose work requires the writing of high quality reports and business documents for internal and/or external readers.

When: 4 and 5 November 2003

Where: University of Canterbury, Christchurch

Cost: \$795

Contact: psc@canterbury.ac.nz

Project Management

This course has been designed for those who have, or are about to have, responsibility for managing projects at any level.

When: 5 and 6 November 2003

Where: University of Canterbury, Christchurch

Cost: \$795

Contact: psc@canterbury.ac.nz

The 1999 FIDIC International Conditions of Contract: Benefits and Pitfalls

Do you or your organisation work on projects nationally and internationally using the FIDIC family of contracts? IPENZ in association with ACENZ offers a half-day course to provide an introduction to the 1999 FIDIC family of contracts for use in projects, with particular reference to the Conditions of Contract for Construction.

When: 13 November 2003 – Auckland
18 November 2003 – Hamilton
24 November 2003 – Wellington

Cost: \$180.00 plus GST – IPENZ Members
\$216.00 plus GST – Non IPENZ Members

Contact: CPD@ipenz.org.nz



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