

Infrastructure Report Launch

On Monday 2 August, the **Hon. Dr Nick Smith FIPENZ** hosted the annual IPENZ stakeholders' function in the Grand Hall at Parliament. The function was attended by approximately 130 people, including representatives of the American Society of Civil Engineers – **Blaine Leonard** (President), **Andrew Hermann** (President Elect), **Patrick Natale** (Executive Director) and **Meggan Maughan-Brown** (Director of International Relations and Strategic Planning) and their families.

At the function, the latest IPENZ policy publication *Assessing the State of Infrastructure – is what you see what you get?* was launched. The report is the result of a study IPENZ undertook to consider how effective reporting mechanisms are in providing a picture on what is really happening to the assets.

The report covers three detailed case studies – electricity transmission, state highways and rail. These case studies were chosen because the representative organisations are infrastructure businesses with a high proportion of their asset value in infrastructure. It also reviews current reporting of levels of service for ten other network infrastructure organisations. The levels of service include electricity generation, electricity distribution, state highways, local roads, water infrastructure and telecommunications.

IPENZ concluded that annual reports do not provide enough information on the state of assets, how assets are currently performing and being managed, or their preparedness to deliver services in the future.

Performance measures are also not well designed and reported by many public-sector organisations. The report recommends government oversight agencies should promote improvements to address these issues.

For organisations owning significant network infrastructure assets, the report recommends that they:

- provide separate information on maintenance, renewal and



The ASCE President **Blaine Leonard** and **Dr Nick Smith FIPENZ** at the launch function in the Grand Hall at Parliament.

capital expenditure for key asset categories in their Notes to the Financial Statements

- ensure their performance indicators are related to outcomes, include current and future targets, and are consistent from year to year showing trends over time
- provide additional asset information on remaining useful lives, replacement levels, asset condition and capacity assessments, and risk assessments.

The report also recommends that private-sector organisations providing critical infrastructure should be required to provide statements of service performance – they are currently not required to do so. IPENZ considers this information is important as there is significant public interest in the infrastructure, its ability to provide services in the future and its criticality to the national economy.

To date, the policy publication has received a positive reception and IPENZ hopes it will encourage more effective reporting.

If you are interested in reading the policy publication, it is available on the IPENZ website at www.ipenz.org.nz/ipenz/media_comm/additional_publications.cfm or email policy@ipenz.org.nz for a pdf copy to be emailed to you.



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President's Message

“Lessons learned by our Australian colleagues will inform our own actions and strategies”

Mutual Benefits of International Relationships

As a small nation of just over 4 million at the bottom of the world, New Zealand not only has a unique vantage point, but we also need to overcome our remoteness in order to keep up with the rest of the world. Because of where we are, this also means helping others even smaller and more remote than New Zealand.

Geographically, our closest neighbours are Australia and the island nations of the South Pacific – stretching from Samoa in the east to Papua New Guinea in the west. All have engineering organisations like IPENZ, along with our various Technical Interest Groups and Collaborating Technical Societies. With each of these countries, IPENZ is well-connected, but the nature of our relationships with their national bodies is quite different and for good reasons.

While our scientists, engineers and technicians have benefited from our “can-do” and “give-it-a-go” pioneering culture, in a remote laboratory setting, the speed of communications and the global nature of business has shortened the time between the innovation stage and the adoption and taking-to-market of new ideas and inventions. Companies and organisations like IPENZ do not have the time or spare resources (monetary and human) to not get their business decisions right first time, and so we all need to learn what not to do as much as to know what to do.

For example, Engineers Australia has 88,560 members and a much larger fulltime staff than IPENZ. Logically, the scale of many of its activities is greater than IPENZ's, and it has arranged and delivered its member services in different ways, as well as undertaken different initiatives. By visiting and meeting with their Senior Office Holders and key staff – as

our Deputy President **Steve Reindler FIPENZ**, Chief Executive **Andrew Cleland FIPENZ** and I did at the end of August – we share not only our successes but also learn from what they have tried and succeeded with – or not, as the case may be. Such issues as major policy issues and advocacy, technical publications and branding, future engineering resources and education, humanitarian engineering and society perceptions of engineers and engineering were all on our agenda. Lessons learned by our Australian colleagues will inform our own actions and strategies so that we can make the best use of our staff and volunteer time and resources.

By stark contrast, we also have relationships with the much smaller professional engineering organisations in the South Pacific, and how we can advance these linkages was also on our agenda in Canberra. IPENZ has been instrumental in facilitating the South Pacific Engineers Association (SPEA), as described in *engineering dimension* earlier this year (May 2010, issue 92). During the first formal meeting of SPEA in Auckland in July, I hosted a dinner function for the delegates from across the Pacific and was greatly impressed by the strong bond between these representatives and the comprehensive work programme that they have agreed to move forward.

A key reason for IPENZ (and Engineers Australia) supporting SPEA is to build engineering capacity in the region – and we have the experience and resources to assist in specific areas so that this capacity building is accelerated. However, what we must learn from SPEA is how not to do this – based on their past bad experiences – and this is why trust and respect, keen listening and open dialogue in international relationships produces the greatest benefits for all involved parties.

Self-sufficient Engineering in the South Pacific

Late in July 2010, the members of the Council of the South Pacific Engineers Association (SPEA) gathered in Auckland for their third Council meeting. IPENZ was in attendance to assist, but the Council meeting was a further step towards creating a regional organisation to improve engineering standards in the region.



Representatives of the six SPEA chapters with the SPEA President and IPENZ Chief Executive at the third council meeting held in Auckland.

The SPEA President, **Leitataua Tom Tinai**, led representatives of the six nations through a comprehensive work plan, finishing with a list of actions to be undertaken over the next six to 12 months. The Council will meet four times per year, three times by teleconference and once face to face. The next face-to-face meeting will be in Papua New Guinea in April 2011.

Active national chapters

The three major chapters in Samoa, Papua New Guinea and Fiji all reported significantly increased national activity since the commencement of SPEA. The chapters in Tonga and the Cook Islands are close to getting underway. Under the SPEA Rules, these chapters pay an annual subscription to fund the costs of the Council, and the subsidy from IPENZ has quickly dropped to less than 25 per cent of the total direct cost.

Showing the importance of SPEA

Templates for membership and registration certificates were approved. Certificates for membership of national chapters and national registers will continue to be issued nationally, but the SPEA logo will be proudly included – the chapters want to show their allegiance in this manner.

Influencing governments

Three policy position papers were approved.

- *The role of engineering in sustainable economic development in the South Pacific*
- *Resilient infrastructure and disaster management*

- *The needs for engineering education in the South Pacific*

The various national chapters will present these to their own governments, and acting collectively, SPEA will approach the Secretariat for the Pacific Community (which supports the Pacific Islands Forum) to seek discussions with senior government officials. Interested Members can read these on the SPEA website at www.spengineer.org

Providing professional development to engineers

A major concern of SPEA is to deliver professional development opportunities directly to engineers in their own countries. Critical areas of need include building construction, road development and maintenance, and small-scale water and wastewater treatment. Ideally, experts with local knowledge would travel courses around the countries.

A delivery model is under investigation – this would involve forming “buddy” relationships between engineering academics resident in the region (presently, only Fiji and Papua New Guinea) with academics in Australia or New Zealand for a period of several years. The New Zealand or Australian academic could coach their counterpart on their day-to-day job, but then they would jointly deliver courses. After two to three years, if all goes well, there will be an expert in the region who can deliver the course without assistance. There would also be a greatly improved educational experience for students studying for their engineering

qualification in the region. It's a win-win situation!

Collaboration with Engineers Without Borders and South Pacific Professional Engineers for Excellence

Engineers Without Borders (EWB) is keen to better partner with engineers on the ground in the Pacific. It was agreed that there would be value in establishing an operating protocol between SPEA and EWB. This might include circulating proposals from EWB to the relevant SPEA chapter prior to project selection for comment on suitability and to find local representatives for projects. The SPEA chapters can also offer projects to EWB that need voluntary labour to make them viable.

In New Zealand, South Pacific Professional Engineers for Excellence (SPPEEx) represents the views of and provides support programmes for Māori and Pasifika engineers. Members of SPPEEx can attend the SPEA Council to ensure that when SPPEEx is planning activities outside New Zealand engagement with SPEA occurs.

Tapping into knowledge at times of disaster

There is general agreement that engineers with specific knowledge of a damaged region and its infrastructure are highly valuable in times of disaster. The SPEA can help find those engineers, identify them to governments and aid agencies and get them deployed. Now that SPEA is being publicised, engineers are more actively engaged in national disaster management committees, and NZAID is keen to tap into the SPEA network. The Association will list several emergency contacts for each national chapter on its website. The connection process actually happened after the March 2010 cyclone hit the Cook Islands – a couple of phone calls were made and the best engineers to assist were deployed.

Finding out more

The SPEA will maintain its website and publish regular newsletters. IPENZ Members are welcome to make contact with local chapters if they feel they can provide value in any way.

Mobilising Engineering Qualifications and Competence



The 2010 IEA delegation in Ottawa, Canada, in June.

IPENZ attended the International Engineering Alliance (IEA) Meetings in Ottawa in June 2010, represented by Chief Executive, **Dr Andrew Cleland FIPENZ**, and Chair of the Engineers Mobility Forum, **Basil Wakelin DistFIPENZ**. In addition, in IPENZ's role as the contracted secretariat service provider, two other staff, **Paul Gardner** and **Rachel Kenny**, were in attendance to support the six agreements.

Positive highlights from an IPENZ viewpoint:

- Additional members (indicated in bold in the tables) have joined the six agreements. This means New Zealand engineers can expect to receive credit for their qualifications and/or competence in even more countries than at present. As the tables show, there is further interest in Asia and southern Europe, and Australia and Korea are looking to increase the recognition of their engineering technologists.
- A positive report on IPENZ's service as secretariat means IPENZ is highly likely to be appointed for a further two-year term from 2011 to 2013 at a fee to be negotiated.
- An acceptance of the model that so far only New Zealand uses for the International Professional Engineers (IntPE) and International Engineering Technologist (IntET) registers. This model treats the international register as a subset of the national register; now assessing candidates for both the national and international register is to become the norm. This will mean that the scope and recognition of the international registers will vastly increase, and New Zealand's registrants will get the benefit. The only bad news is that all the governance documents need to be rewritten (a task that will be led from New Zealand). By the time this is done, the new constitution is accepted and a transition period is allowed for, it will be about 2013 before any change will be effected. IPENZ Members can be very proud that this major change is the result of leadership by Basil Wakelin. Mr Wakelin achieved this result by focusing on the core underpinning attribute – robust means to ensure equivalence of competence standards between jurisdictions.
- A downstream consequence of this is that unification of the Asia Pacific Economic Co-operation (APEC) Engineer and Engineers Mobility Forum may finally be possible, and IPENZ hopes that the outcome will be a better name – something like International Professional Engineers Recognition Agreement.
- Agreement to continue working with the European Network for Accreditation of Engineering Education (ENAE) to see if the exemplar graduate attribute for the Washington Accord and the European graduate profile standard for a second-cycle qualification (five years total tertiary education) can be brought closer together.
- Agreement to build relationships with European regional engineering bodies, the World Federation of Engineering Organisations (WFEO) and the International Federation of Consulting Engineers (FIDIC) to increase uptake of the accredited qualification and competence standards represented by the six accords and agreements.
- Good progress on the country-by-country six-yearly reviews in each of the six agreements – this helps improve the rigour of the overall standards, and therefore enhances the quality marks represented by the accords and agreements.

Things that occurred that will affect New Zealand, and may not be as positive for us were:

- Affirmation that in all future reviews of Washington Accord signatories for compliance with the Accord, the exemplar graduate profile developed and approved in 2009 will be applied as the “test”. This means that New Zealand will have to conform. Our accreditation standard is therefore now required to be higher than prior to 2009. IPENZ will need to discuss the consequences of this decision with the New Zealand Council of Engineering Deans. This will not affect those who have already graduated, but there may need to be future change in professional engineer education in New Zealand.

- A general unwillingness to consider what is the most appropriate means to ensure current competence on a continuing basis. That means that IPENZ will continue as the most rigorous jurisdiction in this respect – it was hoped that others would move closer to IPENZ’s standard.

In addition to the above, Andrew Cleland will lead a clean-up of some procedural issues to ensure all the internal accords’ processes are robust. IPENZ is almost always turned to for such matters as it has developed a reputation as the best system developer for international multi-lateral agreements.

Work led by IPENZ’s Director – Learning and Assessment, **Brett Williams**, to improve presentation of website information on accredited qualifications

was also approved. A paper on protocols for working in countries with risk to visitors was also approved in principle. The developer – none other than Basil Wakelin! Who else but a New Zealander?

Overall, as has been the case for the last decade, New Zealand punched above its weight and we believe our high reputation was enhanced through positive contributions that were respected and accepted by those from other jurisdictions.

Next year the meetings are in Taipei, and IPENZ hopes to make real progress on the big issue – reshaping the basis and governance of the mobility agreements, thereby creating the potential for hundreds of thousands of engineers worldwide to be on the IntPE and IntET registers.

Educational accords		
Washington Accord	Sydney Accord	Dublin Accord
Signatories		
Australia	Australia	Canada
Canada	Canada	Ireland
Ireland	Ireland	United Kingdom
New Zealand	New Zealand	South Africa
United Kingdom	United Kingdom	
United States	United States	
Hong Kong	Hong Kong	
South Africa	South Africa	
Japan		
Korea		
Singapore		
Chinese Taipei		
Malaysia		
Holding provisional status		
Germany	Korea	New Zealand
Russia		United States
Sri Lanka		Korea
India		
Pakistan		
Turkey		

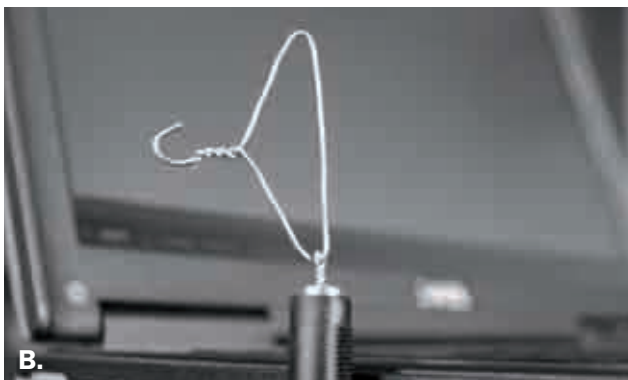
Mobility agreements		
Engineers Mobility Forum	APEC Engineer	Engineering Technologist Mobility Forum
Full members		
Australia	Australia	Canada
Canada	Canada	Ireland
New Zealand	New Zealand	New Zealand
United States	United States	United Kingdom
Hong Kong	Hong Kong	Hong Kong
Japan	Japan	South Africa
Korea	Korea	
Malaysia	Malaysia	
Singapore	Singapore	
Chinese Taipei	Chinese Taipei	
South Africa	Indonesia	
United Kingdom	Philippines	
Ireland	Thailand	
Sri Lanka	Russia	
India		
Provisional members		
Bangladesh	Not applicable at present	Australia

Embracing Engenuity

The engenerate Photography Competition continues to go from strength to strength, with 132 entries received this year.



A.



B.



C.

Overall, the calibre of entries was very high. The judges found they had tough decisions to make, with entrants having given a lot of thought to the theme “Engenuity”.

The winning photo, *Little Planet at Wellington CBD* by **Chusit Apirumanekul GIPENZ**, clearly demonstrated engenuity and photographic skills in the eyes of the judges. When you take a second look you see so much more. Mr Chusit takes home a digital camera to the value of \$1,200.

No. 8 Wireless by **Ben Conway GIPENZ** captured the judge’s attention with this tongue-in-cheek play on the Number 8 wire and the concepts of old with the new. Mr Conway takes away the Taste of Kiwi prize and \$500.

Tube by **Mike Lazelle GIPENZ** took out the inaugural Human Aspect prize with its interesting perspective, good lighting and thoughtful composition. Mr Lazelle takes home \$500.

The remaining nine finalists were then subjected to the critical eye of the IPENZ Membership, via the Members’ Choice poll. This year, 314 Members voted and selected *Dam Supply* by **Tanusha Duffadar GIPENZ** as their favourite. Miss Duffadar also receives a \$500 cash prize.

Thanks to all those who entered, and Beca for its continued generous support of the competition. IPENZ and engenerate look forward to running the competition again next year – so until then, keep snapping!



A. Little Planet at Wellington CBD, Chusit Apirumanekul GIPENZ, B. No. 8 Wireless, Ben Conway GIPENZ, C. Tube, Mike Lazelle GIPENZ, D. Dam Supply, Tanusha Duffadar GIPENZ, E. Surveillance, Chusit Apirumanekul GIPENZ, F. Reflecting the Light, Murray Kennedy MIPENZ, G. Water and Symmetry, Tanusha Duffadar GIPENZ, H. Sunset over the Thames, Hannah Andrew GIPENZ, I. The Heart of a Computer, Dennis Teoh GIPENZ, J. Power Dining, Ray Brown MIPENZ, K. Te Rewa Rewa, Mark Henwood GIPENZ, L. The Early Years, James Thorne GIPENZ.

Fellowships and Awards 2011

Each year at the Fellows' and Achievers' Dinner held in March, IPENZ recognises leaders, contributors and achievers in a number of categories. Expressions of interest for the 2011 Fellowships and awards are now open in the following categories.

Fellow

This category acknowledges a Member's contribution, recognised by peers, to the advancement of the profession or IPENZ, or leadership in one or more of the following areas:

- creation of engineering knowledge by research
- development of improved engineering practices, codes or standards
- development and enhancement of IPENZ and/or its subsidiary organisations
- education that builds engineering and technology skills in New Zealand
- raising the profile and standing of engineering in the community
- an engineering innovation, creation or design with wide impact
- leadership.

Distinguished Fellow

This category recognises an existing Fellow's eminent contribution, over an extended period of time, to leadership in engineering in a technical or wider context.

Distinguished Fellows are recognised for eminent achievements in one or more of the following areas:

- research
- engineering practice
- leadership
- contribution to the community
- innovation or invention
- fostering of engineering in business.

Honorary Fellow

This category recognises an eminent contribution to the advancement of engineering over an extended period by a non-engineer or a person holding an engineering qualification, but whose career has been outside engineering in a traditional sense.

Honorary Fellows are recognised for eminent achievements in one or more of the following areas:

- research
- engineering practice
- leadership
- contribution to the community
- innovation or invention
- fostering engineering in business.

Turner Award for Professional Commitment

This award recognises a Member's demonstrated commitment to the ideals of a self-regulating profession as judged by some of the following criteria:

- actively upholding and promoting the ideals of a profession
- contributing to the processes of self-regulation – voluntary activities on committees, taskforces, panels etc
- willingly disseminating technical information to colleagues, as well as the wider community
- promoting engineering as a career to young people and/or mentoring young engineers
- consistently demonstrating and upholding the IPENZ Code of Ethics
- being actively involved in community affairs
- ongoing commitment to upskilling and maintaining their own knowledge and professional skills.

Supreme Technical Awards

Sponsored by Opus International Consultants

The Supreme Technical Awards recognise technical expertise in engineering as exemplified by contributions to the advancement of engineering practice, innovation or technical breakthroughs. Evidence may include:

- technical papers advancing knowledge

- major improvements in engineering practice through codification or standard development
- recognition by others (nationally or internationally) of leadership in a practice field
- a track record of creating new solutions to engineering problems
- ingenious new artefacts, products, systems or services with enhanced properties.

Freyssinet Award

Building and construction – the design and construction of buildings, including fire engineering, building services, geotechnical, structural and earthquake engineering (excludes bridges and dams).

Angus Award

Water, waste and amenities – the design, construction and operation of reliable supply of services to communities and/or their distribution networks in respect of any of water supply, water storage, wastewater, flood works, community amenities such as swimming pools, beaches, marinas, solid waste, but excluding transportation, communications and energy services.

Skellerup Award

Food, bioprocess and chemical – the development of improved or new bioprocess technology involving chemical processes, biological processes, food processing, storage and specialised transport and materials handling.

Evan Parry Award

Energy systems – the design, development, implementation or operation of improved or new products or services for generation, transmission, reticulation or use of gas and electricity, including motor and engine technology.

Nominations open 1 September 2010.

Nominations close 31 October 2010.

Nomination and entry forms are available at www.ipenz.org.nz or by contacting the Awards Co-ordinator, Dionne Needham, on awards@ipenz.org.nz

Young Engineer of the Year Finalists 2010

The Young Engineer of the Year is the most hotly contested title in the Engineering Excellence Awards' stable. The 2010 judging panel was flooded with entries of a uniformly high standard.



Young Engineer of the Year award finalists. From left to right: **Brendan Donnell MIPENZ**, **Matthew Lander MIPENZ** and **Anna Robak MIPENZ**.

This year's finalists submitted entries describing their career development, contribution to the wider community and recognition by their peers. They exhibited high levels of personal and ethical behaviour and demonstrated excellence in engineering, working on successful projects at home and abroad.

In the final component of the competition, the three finalists will each be required to showcase their communication skills by giving a short public presentation on an engineering project of their choice.

Find out more about the 2010 Young Engineer of the Year finalists below.

Brendan Donnell MIPENZ

Mr Donnell is a Structural Engineering Team Leader at Sinclair Knight Merz. A dedicated student, he won the Senior Prize in Civil Engineering in his final year at the University of Auckland.

Joining SKM after graduation in 2002, Mr Donnell has been a key player in many high-profile projects including the Forsythe Barr Stadium in Dunedin and the Victoria Park Tunnel Early Works Package.

Mr Donnell has expertise in earthquake resistant design and retrofit, liquid retaining structures and safety in design. His interest in structural engineering in development contexts led to volunteer engineering positions in Pakistan and later to a role as Senior Structural Engineer at the SKM project office in Honiara, Solomon Islands.

Matthew Lander MIPENZ

Mr Lander is an Associate – Structural Engineering at Beca Carter Hollings and Ferner in Wellington.

He has a special interest in the integration of structure with architecture and tutors students at the School of Architecture on structural engineering, as well as working with colleagues at Beca to improve their understanding of architectural values.

Mr Lander was the Structural Engineering Manager for the new Bank of New Zealand (BNZ) building on Wellington's waterfront. The wider project team included CentrePort and BNZ, Fletcher Construction, Jasmex, Tonkin & Taylor and Beca. This gave Mr

Lander an opportunity to prove himself as a manager as well as flexing his engineering muscles.

Anna Robak MIPENZ

Ms Robak was the Opus Young Achiever of the Year in 2008 and is currently employed at Opus as an Environmental Asset Manager focusing on economic evaluation.

She is also currently pursuing doctoral studies to evaluate the economic, environmental and social costs and benefits of water supply systems, with particular emphasis on trade-offs between public health benefits, environmental impacts, and wider economic benefits.

A champion rower, Ms Robak has completed many adventure races including an Ironman in 2006, and is involved in disaster relief and emergency response.

She is a Futureintech Ambassador working with young people to encourage them into careers in engineering.

The Young Engineer of the Year finalists will give their presentations at 6.00pm on Wednesday 6 October at URS New Zealand Limited in Auckland.

The Young Engineer of the Year award will be presented at a black-tie dinner in Wellington on 24 November 2010. Tickets go on sale 1 October 2010.

For more details, please visit www.nzeeawards.org.nz

United Kingdom Branch Update



The IPENZ United Kingdom (UK) Branch was very fortunate to have Professor **Paul Jowitt FIPENZ**, President of the Institution of Civil Engineers (ICE), as the speaker at its annual general meeting (AGM) on 17 June.

Professor Jowitt is Professor of Civil Engineering Systems and Executive Director of the Scottish Institute of Sustainable Technology at Heriot Watt University in Edinburgh. He became President of ICE in November 2009. His major interest is sustainable development, particularly in terms of systems-level solutions in engineering and the environment.

Professor Jowitt was Erskine Fellow at the University of Canterbury in 1997 and retains strong links with New Zealand, visiting again in 2010.

His presentation was based on his 2009 Presidential address, entitled “Now is the Time”. He spoke of the “halcyon days” of civil engineering in the 19th Century, but proposed that “tomorrow is the time for an engineering renaissance”. He spoke of the need for engineers to “engineer the world away from an environmental crisis”, caused in part by greenhouse gas emissions and profligate resource use, and to “provide the infrastructure platform for an increasingly

urbanised world” in order to lift a large proportion of the world’s population out of poverty.

Professor Jowitt challenged engineers to “take a more ‘systems’ view of the world”, to think about the impact of engineering both spatially and temporally, in a way that hasn’t been done in the past. His presentation was as inspiring as it was entertaining and the Members who attending the AGM were delighted to have had the opportunity to hear Professor Jowitt speak.

With his support, the UK Branch was able to hold its AGM at One Great George Street, the beautiful neo-classical building that is ICE’s headquarters in Westminster, central London, near the Houses of Parliament.

The Branch also elected its Committee, which for the first time in an IPENZ Branch, was an all-female line-up. **Simone Beesley GIPENZ** stayed on as acting chair, as no replacement was forthcoming, **Rebecca Gray GIPENZ** was elected secretary, and **Judy Henderson MIPENZ** remained as treasurer.

IPENZ Members who move to the UK can update their details by emailing ipenz@ipenz.org.nz in order to receive the UK Branch Newsletter. The UK Branch has a website at www.ipenz.org.uk where Members can find out about activities in the UK.

Outcomes from the August Board Meeting

At its meeting on 3 August 2010, the IPENZ governing Board:

- approved a business plan for the period 2010–2015. This period encompasses the IPENZ centenary in 2014 to ensure that a suitable centenary celebration can be held and that afterwards IPENZ is in good shape for the next century
- noted that this business plan relied on extension of present government funding for IPENZ’s Schools programmes, and should that funding be discontinued there would be a need for a major rethink of the extent of other programmes that would be possible
- agreed on a significant revamp of Member publications, taking into account the 2010 Member survey results – the changes will be progressively implemented so
- will be individually announced at the appropriate time. One major change is increased emphasis on web publication of peer-reviewed learned society papers
- agreed to invest more resource into creating a culture in the profession of assisting Members whose practice is falling below acceptable standards
- agreed to invest in the provision of improved event management services for use by Technical Interest Groups and Collaborating Technical Societies, so as to minimise costs and maximise returns to the profession from conference and seminar activity, but make the provision of the service cost-neutral
- agreed to a three-year programme of investment to create a comprehensive record of New Zealand’s engineering heritage prior to the 2014 centenary
- in order to make the above possible, agreed to increases in 2010/2011 subscriptions at or below the rate of inflation
- agreed to a continuing allocation of resources to engenerate (to support young people), to Student Engineers New Zealand, and to the Women in Engineering programme
- agreed to provide secretariat services from 2011 to the forthcoming Board for Engineering Diplomas on a cost-recovery basis
- signalled the need for a review of registration and competence assessment fees for 2012 and beyond in response to a comprehensive review of the competence-assessment process.

Collaboration Creates Learning Opportunities



Futureintech Ambassador **Rebekah McAteer GIPENZ**, a Geotechnical Engineer from Tonkin & Taylor, talks to students at King's School in Remuera.

IPENZ's contract with New Zealand Trade and Enterprise for Futureintech is designed to encourage collaboration between industry leaders and education communities. As part of this effort, IPENZ Branch members and Futureintech Facilitators are working together to provide valuable opportunities for students.

One way the Facilitators keep Branch members in the loop on what the Ambassadors are doing in local schools is by sitting in on Branch meetings. They talk about the different ways that Ambassadors are getting students interested in maths, science and technology, showing the relevance of these subjects in their jobs, and highlighting career pathways.

Futureintech also contributes regular articles to the Auckland Branch and

Canterbury Branch newsletters, and Canterbury Branch president, **Andrew Lamb GIPENZ**, recently began linking members to Futureintech's monthly online publications *enewsforschools* and *enewsforindustry* (www.futureintech.org.nz/e-news.cfm).

Through this communication, the Branches get the benefit of seeing the positive impact that local engineers are having in their communities. It also opens doors for them to reach out to local schools and raise the profile of the engineering profession for students.

For example, the Hawke's Bay Branch is collaborating with the Hawke's Bay Regional Council on their Rotary Pathway Design Challenge, in which students compete to design a gate for the Rotary Path Network. They have enlisted the help of Facilitator

Jenny Dee, who is supporting the administrative side of the competition and promoting it to teachers and industry leaders in the region.

In return, the Branch members can help Facilitators provide unique learning opportunities to students, such as the IPENZ Pickering Lecture series with Jetpack inventor **Glenn Martin** taking place around the country in September. The Hawke's Bay Branch recently decided to host its lecture at 1.30pm instead of 7.00pm so that students could attend, and allocated 70 per cent of the seating in the auditorium to schools.

IPENZ Branches can also provide a network of contacts in the local engineering industry. This helps Facilitators locate engineers who may want to volunteer as Ambassadors, or companies that would be willing to host site visits for students.

Wellington Facilitator, **Susan Weekes**, has used this network to interact with schools that fall outside of Futureintech's official coverage, such as schools in the Wairarapa that needed help finding local engineers to attend their careers evenings. In another case, she was able to help a student at Waimea School in Nelson who was interested in engineering. Between Mrs Weekes, the student's teacher, and local IPENZ contacts, the student gained access to local engineers who could talk to him about career opportunities.

For more information about how Futureintech is promoting technology-, engineering- and science-related careers, visit www.futureintech.org.nz

Professional Development Opportunities in 2011

The IPENZ Continuing Professional Development (CPD) team recently sent a survey to all Members for feedback on the range of learning opportunities offered in 2010.

It is a good chance for Members to send their ideas to the team and suggest areas of interest that could be developed into a new seminar for 2011.

Last year's survey led to a range of technical courses being added to the CPD programme, including "Seismic Design for Non-structural Engineers" and "Earthquake Engineering".

These two courses demonstrate IPENZ's commitment to running technical seminars that are current and interactive in nature.

The CPD team received excellent feedback from attendees on both courses and the popularity of these subjects has enabled

the team to run the seminars successfully in regions around New Zealand, which is something it strives to do.

In 2011, the team hopes to continue to offer its great range of essential skills courses and include new and exciting technical subjects to the programme, such as "Flood Hydrology", "Water and Wastewater Engineering" and "Bridge Design".

As it prepares to launch its 2011 programme, the CPD team would appreciate any further feedback on the range of learning opportunities provided by IPENZ.

Contact the professional development manager on profdevmanager@ipenz.org.nz or phone 04 473 2022.

Professor Terry Healy 1944–2010

IPENZ sadly reports the passing of Professor **Terry Healy FIPENZ**, who died on 20 July 2010.



Widely regarded as New Zealand's pre-eminent coastal scientist, Professor Healy spent a lifetime researching coastal erosion, sedimentation and hazard management. This included research on tsunamis, and applying his environmental expertise to port and marina developments around New Zealand – from planning and development, to management and monitoring of issues such as dredging and spoil disposal.

In the 1980s, Professor Healy's cutting-edge advocacy for using knowledge of tides and currents to dump sand dredged from navigation channels in order to build adjacent beaches became a commonplace strategy.

He is particularly credited with making a significant and ongoing contribution to the sustainable growth of the Western Bay of Plenty economy.

He was made a professor at the University of Waikato in 1990 and since then, built the university's Coastal Marine Group into the leading research group of its kind in a New Zealand university. His professorial Chair, sponsored by the Port of Tauranga Ltd since 1990, was the first Chair in Science to be sponsored by industry in New Zealand.

International recognition for his work includes acknowledgement as a "Top 100 Scientist" by the International

Biographical Centre, Cambridge, United Kingdom. He was the first New Zealander to receive the Alexander von Humboldt Foundation Preisträger Award in 1997, and has a string of other fellowships to his name.

Locally, he was a leading member of the Royal Society of New Zealand, and served as New Zealand's primary advisor to Civil Defence on tsunamis. In 2003, he was elected a Fellow of IPENZ – one of only a select few non-engineering graduates to be accorded the honour.

Professor Healy has a prodigious publication record, and won 150 research contracts totalling more than \$10 million. He also led 21 major projects and expeditions including two to the Antarctic.

He counted his body of work over 36 years for the Port of Tauranga as his greatest achievement but wanted to be remembered for his work over many years supporting graduate and postgraduate student researchers to achieve their goals. He believed his strengths lay in supervising student research, and encouraged his students to treat him like "a sports coach". He supervised 119 students undertaking research at masters and doctoral level.

Professor Healy's lifetime of work was honoured with many accolades in 2010, including being made a Member of the New Zealand Order of Merit in the Queen's Birthday Honours for services to science. Only days before, he was awarded a University of Waikato Medal and in May he was made a life member of the New Zealand Coastal Society.

President

Garry MacDonald
president@ipenz.org.nz

Deputy President

Stephen Reindler
deputy.president@ipenz.org.nz

Chief Executive

Andrew Cleland
04 474 8935
ce@ipenz.org.nz

Registrar

Jeff Wastney
04 474 8983
registrar@ipenz.org.nz

Managing Editor

Juliet Palmer
04 474 8943
editor@ipenz.org.nz

Membership Enquiries

Michele Boniface
04 474 8948
membership@ipenz.org.nz

National Office

Ground Floor
158 The Terrace
Wellington
New Zealand
04 473 9444
ipenz@ipenz.org.nz
www.ipenz.org.nz



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