

CURRENT AFFAIRS

News and views from Ergo Consulting Ltd

ISSUE 9 - December 2011



OFFICE HOURS AND SEASON'S GREETINGS

Our offices will close at midday, Wednesday 21 December 2011 and re-open at 8am, Monday 9 January 2012.

Ergo wishes you and your families a Merry Christmas and a Happy New Year. We hope you have a relaxed and happy break. May you enjoy the simple things this festive season, like taking a picnic to the park, playing a game with the children, or simply walking barefoot on the grass.

THE ERGO PROMISE

We will...

- take responsibility for our designs and, as such, own up to our mistakes
- be generous with our knowledge and encourage developing engineers
- provide accurate information and will voice any doubts or uncertainties that we have.

DEVELOPMENT OF ENGINEERS

There has been a huge migration of workers to Australia over the last twenty years, particularly in the 25 to 39 year age group. Unfortunately New Zealand businesses simply cannot match the salaries on offer across the Tasman. While it is tempting to be fatalistic about the trend, remuneration is only one decider and probably not the most important one. Staff need to feel valued and part of the team. They want their personal values and family commitments to be acknowledged. They want a work environment to be fair and also fun. Good leadership and clear communication are also important. I believe that if these things are in place it is far less likely that staff will look elsewhere.

A demonstrable way of valuing staff is by investing in training and career development. Being generous with our knowledge and encouraging developing engineers are key components of the 'Ergo promise'. Our company takes its obligations as an employer seriously, and considers professional development to be a fundamental obligation. We consider this a key factor in Ergo's low staff turnover.

In concrete terms, professional development at Ergo is characterised by:

- Alignment to professional bodies such as IPENZ and ACENZ.
- Payment of IPENZ's annual engineering membership fees for staff.
- Mentoring, both generally and for IPENZ accreditation. In recognition of this commitment, IPENZ recently awarded Ergo Professional Development Partner status.
- Six-monthly performance appraisals which are meaningful and measurable. Ergo uses the twelve IPENZ competencies in its appraisal criteria. We have found these to be a good way of tracking

employee development, and identifying areas needing further development.

- Weekly in-house training sessions. These are developed and presented by employees with the objective of sharing knowledge in a regular structured way. Ergo's directors believe everyone has knowledge to share from past education and experience.
- Provision of a work environment where continuous learning and development can take place.
- Study support for relevant professional qualifications.

Professional development also plays a role in Ergo's employment policy. To support developing engineers, our company has made a commitment to employ a University graduate each year. This year we have employed three, one for the Control Systems department, and two for Power Systems. Each summer we also provide placement for a third year undergraduate to help them gain the practical hours required for their engineering degree. As a company Ergo is doing what it can to foster and retain engineering talent.

NIGEL

Nigel Stevenson
Director – Control Systems



MODELLING WITH ETAP

Ergo is excited by the opportunities that its new ETAP software offers its engineering practice. The powerful power systems modelling and analysis software can be used for a range of applications including load-flow, protection, cable modelling, earthing, and power quality studies. Initially Ergo made use of ETAP's cable sizing module only – As with any unfamiliar software, there was a learning curve. However that process got a major boost in 2010 when Network Engineer Maria Kobe joined the firm. Since then Ergo has used the software on a number of substation earth grid designs, and on a modelling study for an offshore oil wellhead platform (WHP).

ETAP's Ground Grid module has been used by Ergo to model earth grids for a number of Powerco and Top Energy substations. From earth conductor, fault current and soil information the module produces multi-coloured, 3D voltage profiles which assist in understanding of step and touch potentials in and around the sites. By experimenting with parameters such as the placement of earth grid conductors and earth rods, the module helped Ergo determine which parameters were critical. Earthing designs could then be produced which reflected the information gained from the modelling process.

Ergo was recently approached to undertake a modelling study of the Maari oil field's 11kV electrical system. The field, off the coast of Taranaki, has only been in production for two and a half years. However in that

time, operating conditions and loads have changed, and additional production wells and equipment have been connected. Ergo used ETAP to review cable and generation capacities, the impact of various changes to the WHP electrical system since initial design, and analyse present and future power quality issues. The modelling helped determine whether the existing protection settings were still appropriate, and identify limiting factors within the generation and distribution systems.

"What is particularly good about ETAP," comments Maria, "is the way various modules are interconnected – Information entered for one part is used by other parts." The latest version of the software was released in November 2011. Maria is keen to use ETAP11 and hopes to undertake a wind farm connection study so she can try out its hugely upgraded Wind Turbine Generator and Photovoltaic Array module.

Ergo is delighted with the results it is achieving with ETAP and believes that the modelling software is a great resource for its clients. In the past Auckland companies have tended to use a consultancy outside of the region for modelling expertise. They may still choose to do so, but it is no longer necessary - The expertise is right here in Auckland, at Ergo.

DOUBLE UP

This year's annual client function doubled as a showcase for the new office premises. In past years it was held at Urban Café (yes, the Urban of 'Tea Party' fame), and was open to Ergo's clients, suppliers as well as to friends and family of the company. Because of space constraints it was decided to hold a function in October just for friends, families and suppliers. Around 100 people attended that event.

Creating two separate events made the client function, held in November, more spacious for the 50 or so people who attended. The new arrangement had the bonus (some would say disappointment) of halving the number of speeches made by Ergo's directors. As Chris has already spoken at the earlier event, the floor was entirely Nigel's. Nigel proved to be an auspicious name on the night, with Nigel Ellis of Vector wining the prize draw.

Urban Café did not miss out on Ergo's business, as they provided the delicious finger-food for both occasions.



Ergo's Soumya Sridhara discussing the finer points of design with Jarrod Cox, Ashneel Prasad and Renella Carneiro from Vector



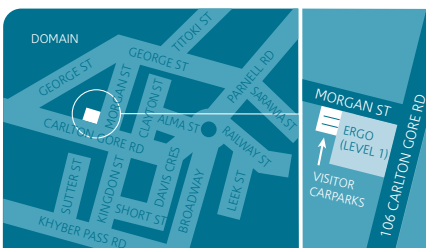
Two Nigels arm wrestle for Ergo's prize draw.

STAFF PROFILE: BRETT QUEENIN

Ergo's new head of CAD is **Brett Queenin**. He joined the firm at the end of November and is still settling into the company and into his role as Head of Department. Nevertheless he has already impressed with his management skills and his ability to make things happen.

Brett has more than fifteen years' experience in electrical automation and control systems draughting and design. He has worked mostly for the marine/super-yacht sector, starting as an electrical designer and then progressing to electrical design manager. His most recent work experience has been a short term contract for BCS Group, a company which exports airport baggage handling systems.

Fortunately for Ergo, Brett found contracting unsatisfying. He decided to look for a permanent position, and was immediately attracted to Ergo because of its team spirit and family-friendly culture. Ergo is delighted to have Brett on board. His experience, work ethic, and the value he places on family all make him a good "fit" for the company.



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