

RTSA Professional Development Initiatives

Three major Professional Development initiatives have been implemented by the Railway Technical Society of Australasia (RTSA) to improve the standing of railway professionals and to help the railway industry address the critical shortage of skilled work force. These interrelated initiatives are as follows:

- Conducting a short survey on professional development activities and skill shortages within the railway industry;
- Holding a series of Australia-wide symposiums on professional development involving a broad range of participants from the railway industry; and
- Launching the industry-based Professional Development and Assessment Program (PDAP).

Short Survey on Professional Development Activities and Skills Shortages in the Railway Industry

Several organizations have recognized the benefits of training and development for their staff. They provide various structured and unstructured development opportunities for young and mature professionals on various aspects of railway technology.

The RTSA has developed a short survey on professional development activities to better understand the technologies and sub-specializations within the railway industry. This survey is expected to provide guidance to the RTSA with regards to its Continuing Professional Development (CPD) initiatives, which are designed to facilitate the up-skilling of professionals in these technologies so that productivity improvements may be achieved in the future.

The survey is targeted at senior organizational managers within the railway industry, whose participation will support the RTSA to achieve its objective of providing assistance to the industry.

Series of Professional Development Symposiums

On 19 September 2007, RTSA conducted the first of its series of Symposiums on Professional Development at the Westin Melbourne. The next half-day symposium is scheduled to be held on 12 February 2008 at the Sydney

Masonic Centre. The principal objectives of the Symposiums are to identify the characteristics of the various training and development programs currently offered within the Australian railway industry and to facilitate discussion designed to improve current training and development programs.

The participants at the Melbourne symposium represented a broad spectrum within the industry. Several presenters outlined a range of different development programs offered by their particular organizations. It was apparent that all of the organizations that they represented were committed to professional development albeit utilizing slightly differing models.

Phil Gibbs described SKM's internal professional development program and pointed out that it provided assistance to new graduates towards the attainment of professional recognition, including Chartered status.

David Anderson from Interfleet noted similarities between the UK and Australian rail industries especially their fragmented nature. Interfleet was interested to trial the UK "Passport" scheme in Australia. David suggested that the scheme provides a mechanism through which younger staff could gain wide industry experience.

Mal Lauder from Connell Wagner stressed the importance of a recruitment and retention program in the commercial context and the advantages that it has brought to his organization.

Wilson Wong, a young engineer from Maunsell emphasized the importance of staff development in the context of the organizational environment. Wilson indicated that staff members at all levels within Maunsell have been assigned a mentor to assist with their professional and career development.

Bernard Shepherd briefly outlined the GHD graduate training program, which is spanned over 3 years and is open to all graduates and other staff who are involved in consulting work.

Fran Boyle from the Department of Infrastructure, Victoria detailed the "Rail Engineering Graduate Program" which was introduced earlier this year. This 3 year rotational program is currently focused on signalling and electrical engineers. In the future the program will be rolled out to other disciplines. DOI is utilizing the graduate training program framework developed under the Rail & Tram Infrastructure Industry Committee (RTIIC).

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DELAY TO ISSUE 37 Our apologies for the delay in production of this issue. This was as the result of the late submission of several articles.

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Point of View

Max Michell

It can hardly have passed notice that there is a Federal election in the offing. The media, who are always hungry for 'news', even if only in 10 second grabs, have been fluffing around the wings of parliament for quite some time now, looking for some drama that they can latch onto in anticipation of the actual election being called. However it seems that this time, if the polls are to be believed, that there is a real possibility of a change of government, which has given the media reams of stuff to serve up to long suffering readers and watchers. It has also made candidates unusually receptive to views, thoughts and ideas that in some way might enhance their chances. The major way you can enhance their chances is to give them your vote, or better still let them think that by listening to you that they will improve their chances of getting your vote

Every individual will have their own feelings and views on the prospect of a change of government or otherwise (which is entirely a matter for themselves) but it does present an unusual

opportunity to use some leverage to get a few important transport items onto the Federal political agenda. Here we have a government who, if the polls are a reliable guide, have their back to the wall but with a huge financial war chest as a result of yet more 'unexpected' budget surpluses, while on the other side there is an opposition who see hope for the future and are equally aware of the war chest. In both cases there is almost certain to be a greater than normal propensity for promises (hopefully 'core' promises) that will shore up votes for whoever is thumping the tub.

In recent years there has been a resurgence of interest, at a Federal level, of funding for rail, even if to some extent it is still small bickies and has taken far too long to arrive. These funds have been entirely for main lines and port links and have conspicuously ignored urban public transport. The Feds have time and time again stumped up with very substantial funding for urban roads (even if they are in the guise of through routes) – the M7 orbital in Sydney, the Scoresby freeway in Melbourne, South and Portrush Roads in Adelaide and so on – but have never even seriously considered public transport as a parallel issue. Over 60 % of the population of Australia now lives in or adjacent to capital cities, yet the mobility of these people is significantly compromised by the unwillingness of the Feds to consider any form of national funding for public transport. Freeways yes, public transport no!

There is a quite valid argument that poor decision making and even poorer oversight has resulted in a number of excessively costly and in some cases relatively useless expenditures by state governments on public transport projects (look no further than the Cumberland link in Sydney - \$60 million 10 years ago and it now has 5 trains per day). Such events quite reasonably are something of a turnoff for the Feds who see public transport as a looming financial black hole well watered by parish pumps. However it is not beyond the bounds of reality to come up with appropriate mechanisms to manage and control funding from the Feds while still requiring a demonstrable level of fiscal responsibility from the states. Co-funding of rolling stock (which in public transport terms must include buses, trams and ferries!) would be a start; maybe co-funding electrification with modern electric systems (25kV



ac would get a go, 1500v dc would not) might be another; support for underground or other creative linkages that would have a significant value overall might be a third. Offset benefits such as reduction of greenhouse gases, reduction of travel times, reduced dependence on increasingly expensive imported fuels and reduction in medical costs associated with road trauma could fall into this category. However it might be structured, there is a better chance right now to get urban public transport onto the Federal radar than there has been for the last 35 years.

The long running and highly emotional saga of road cost recovery has made a little progress over the years, but only as compensation for some huge backward steps. The National Transport Commission (NTC) has waffled around this issue, but even then has been too adventurous for the collective Ministers of Transport, many of whom are bound in their allegiances to pressure groups or party loyalties rather than good policies and the 'public interest'. Despite all this there finally seems to be a window of hope in that the NTC now recognise the inequity of the current road truck cost recovery system, which essentially is a 'one size fits all' approach. It would seem that some form of differential cost weighting for heavy load / long haul activity as compared to delivery truck / short haul activity is now on the horizon, but this needs to be shored up (or even propelled) by a more convinced body politic. A volatile election might be a good opportunity to get a good grip on the hearts and minds device of your 'next' local Federal member.

AusLink was a significant step forward in terms of Federal funding of land transport, or at least it was in theory. In practice, while it has distributed some largesse in the manner it was designed to do, it has also simply been another way for the narrow minded and opportunistic local members to lubricate their own interests. The parish pump is alive and well in AusLink. A major issue for AusLink is to break with the past and start to deal with land transport as just that, not simply as re-badged road transport.

State based road authorities, some of which are showing alarming signs of being independent fiefdoms in the mould of the old Tasmanian Hydro, have taken the opportunity that AusLink has presented to follow their old ways of rampant road construction without any evaluation of substance, far less any comparative evaluation with alternatives. Even worse is that many such projects are 'justified' (in the road minds) on quite narrow and specious grounds. Lack of any proper accounting for

social and environmental issues, road trauma, the known capacity / growth linkage on enhanced roads and so on is heavily tilting the playing field to more of the past. Compatible costing across road and rail, with the national interest (not sectional or state) as the driver, should be an early issue for AusLink so that modes can be compared on real issues looked at in a holistic framework.

Part of this is the vexed issue of planning and environmental processes, which these days act as a significant brake on progress. Might it not be a good idea to design new transport corridors, such as freeway bypasses of regional towns and replacement of existing poor alignments, as transport corridors rather than road or rail corridors – even if the prospect of both occupying the common corridor is not high on the agenda at the time this is first considered? Anything that might enhance the capability and efficiency of land transport, now or in the future, should be regarded as a current priority.

The image is a promotional graphic for Interfleet Technology. At the top right is the logo for Interfleet Technology, featuring the word 'Interfleet' in a green sans-serif font with a green swoosh above it, and 'Technology' in a smaller font below. Below the logo is a dark green horizontal bar with the text 'International Rail Technology Consultants' in white. The main body of the image is a collage of three photographs: the top one shows a yellow and black train (SD 3197) in a station with the text 'Business Solutions' overlaid; the middle one shows a red and yellow high-speed train with the text 'Rolling Stock' overlaid; and the bottom one shows a view of railway tracks and overhead power lines with the text 'Railway Systems' overlaid. At the bottom of the collage is a dark green bar with the text 'making it happen' in white, where 'making it' is smaller and 'happen' is larger. Below this bar is the website address 'www.interfleet.com.au' in white.

I am sure that readers will have a number of other transport issues that could and should be placed on the Federal agenda. But just having views is of little use if you don't pass them on to someone who thinks that they will matter after the election.

I would assume that something like 60% - 80% of my readers will already have a good idea who (or at least which party) they will vote for when the election comes. However your local candidates do not need to be aware of your views while you are trying to leverage some commitments from them in regard to the rail industry or for that matter any other passion that you might have. If you feel strongly about issues how about at least challenging your major party candidates (both of them) and see what you can achieve. Individually the answer may be 'not very much', but in the arcane practice of backroom politics you might be surprised to find that a few views forcibly put to candidates can sometimes be magnified out of all proportion as 'a groundswell of opinion' or some such.

You have a window of opportunity here, one which comes every three years or so, but in this case is unusually receptive to your views. Why not see what you (and we) can achieve!

Government Relations Committee

The long awaited House of Representatives report on regional road, rail and port linkages, was released on 13 August 2007 and is found at the following web address: www.aph.gov.au/house/committee/trs/networks/report.htm

Although there was only one specific rail recommendation there was much that we should be pleased with.

As is typical with Neville, the report was not too wordy and provides solid recommendations and insights into the Committee's thinking. The Government does not have to accept these recommendations, but does have a responsibility to make a response to these recommendations.

Nevertheless throughout the report there is a very strong sense that rail transport, ports and integration with intermodal terminal need a paradigm shift to meet the looming freight task. Indeed that the Commonwealth should take a leadership role in this process, not just funding projects through AusLink but also through developing stronger engineering and planning capability in DOTARS and working better with the states.

The flagship nation-building project of the Inland Rail Route was strongly endorsed. Also aspects of regional rail, in which the RTSA facilitated debate, were also picked up. The Committee believed that regional rail needed much stronger support from government and grain industry.

The RTSA issued a press release commending the recommendations in the report and its direction. The RTSA put a lot of work into this Inquiry, over a number of years and a number of our members involved. I would like to thank all those involved.

Given the stature of Neville within the Government on regional and transport matters, we should reasonably expect rail initiatives to come from the Government and Opposition leading into the election campaign.

One of the issues unfortunately, we did not present to the Neville Enquiry, was assessments of combined road / rail corridors within AusLink.

The RTSA has made a submission to the NSW Department of Planning on the EIS for the Pacific Highway upgrading between Kempsey and Eungai on the north coast of NSW. In its submission the RTSA has asked that an initial cost-benefit assessment be conducted for a combined rail/ road easement rather than a stand-alone road development.

This would test, as part of the EIS, the merits of pursuing or discounting detailed assessments of a combined road/ rail corridor. This area of the North Coast presents a real challenge for both road and rail; for road it is a black spot for accidents, for rail a bottleneck in track performance.

The RTSA's concern is that significant challenges face roads and rail infrastructure development in the upfront activities of land acquisition, environmental studies and community consultation. The time and costs to undertake this work is extensive and should be done together if possible.

On top of this, a combined corridor may have economic, environmental and social benefits. These may be:

- Lower construction costs if both a road and rail development is required,
- Better environmental outcomes with lower fragmentation of ecological habitat, and an integrated approach to noise
- Better social outcomes in relation to accidents, with integrated designs to alleviate level crossings and improved access to rail corridor for rail incidents.

Without undermining Commonwealth/ ARTC strategies for an Inland Rail Route, or any other current ARTC investments, the RTSA believes this assessment is important to ensure short-term opportunistic value has not been missed. This should be seen as an opportunity for an integrated road rail policy and not a threat to various long-term rail strategies.

The RTSA only seeks to have this assessment performed as part of an informed and transparent debate on both tactical and strategic rail development on the North Coast.

The RTSA has also written to Federal Minister, Mark Vaile in his capacity as Minister for Transport and Regional Services, requesting such consideration. The Commonwealth has influence over funding for both road and rail in this corridor, and part of this project falls within Minister Vaile's electorate.

The RTSA has also made a submission to the review of the Victorian Rail Freight Network, headed by Tim Fischer. Basically our submission built on research and submissions from the Neville Enquiry and our regional rail symposium. This enquiry is looking at the rehabilitation of Victoria's regional rail infrastructure, standardisation of gauge and operations in regional areas. The RTSA's submission will be posted on our web site, after being made public by the enquiry.

Finally, we are keen to develop a response to the Victorian Government's enquiry on emerging technologies for level crossings. This enquiry closes in early October 2007 and we hope to make a valuable contribution.

Technology provides solutions for Level Crossing Safety

The Railway Technical Society of Australasia (RTSA) has issued a press release calling on the Australian Government to investigate new and emerging technologies for fail-safe protection at railway level crossings.

The RTSA has welcomed the decision by the Victorian Government through its Road Safety Committee for the setting up an inquiry into Improving Safety at Level Crossings and to identify existing, new and developing technologies for implementation to improve safety at level crossings.

Along with greater enforcement, public awareness campaigns and a review of signage standards, Governments also needs to commit additional funding to implement new technologies for the active protection of life and property.

RTSA Executive Chairman, Ravi Ravitharan said 'The incidence and severity of accidents at level crossing in recent times is a national transport tragedy.'



"Clearly both the road and rail tasks are rapidly expanding, as Australia meets the challenge of a rapidly growing freight task. With the increasing use of larger, longer and heavier trucks, such as B-Doubles and B-Triple trucks, the risk profile of level crossings on our arterial and regional transport corridors appears to be deteriorating.

"The effectiveness of protection measures at level crossings needs to be re-assessed in light of these

new freight challenges. The use of new technologies to protect drivers and pedestrians should play a more prominent role in reducing the risk profile," Mr Ravitharan said.


The RTSA is calling on all Australian Governments, to commit additional funds to research cost-effective fail-safe level crossing technologies as part of a coordinated response to the scourge of level crossing accidents.

The RTSA favours a national body responsible for overseeing research into safety of level crossings and the implementation of technological solutions to improve their safety. Such a national body should bring together scientific experts to review past level crossing accidents and identify the causes of these accidents as well as explore possible technological solutions, which would mitigate risks of accidents at level crossings in the future.



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Obituary - Ian Macfarlane

Ian Bruce Macfarlane, BE (Mechanical and Electrical) CPEng MIEAust FCILT was born in 1935 at Manly and died in August 2007 aged 71 at Murwillumbah. His education included Knox Grammar School in Sydney and the University of Sydney. In 1955 he joined Commonwealth Engineering as a Cadet. This was the start of a diverse career which later led to the Federal public service working in defence, intelligence, railways, aviation, and trade. His work and wide interests took him to many parts of the world, including Britain, Washington DC, Paris, India, China and Malaysia. In 1990, aged 54 years 11 months, he retired from the Australian Trade Commission as Manager, Transport Systems and Engineered Plant. From there, he set up a rail consulting company Macfarlane, Fuller and Associates Pty Ltd as well as the Brisbane Locomotive Works Pty Ltd.

During the 1970s with the Department of Transport in Canberra, his work included being Project Leader of the Australian Urban Passenger Train (the forerunner of the Brisbane and Perth electric multiple unit fleets) and Technical Manager for the Sydney to Melbourne rail electrification study. Although the study results found favour with Prime Minister Fraser who offered financial assistance in 1980 to NSW and Victoria to electrify the Sydney - Melbourne railway, the project did not proceed. However, Queensland proceeded to electrify its Central Queensland coal railways and Brisbane to Rockhampton - in all a longer distance than Sydney - Melbourne. Ian made an appreciable contribution to bringing modern high voltage (25,000 volts AC) electrification to Australia for both freight and passengers.

Ian's contributions to railways went far beyond paid employment. In 1981 he suggested with Bruce Sinclair and others through The Institution of Engineers, Australia (IE Aust and now Engineers Australia) a T-Link concept of a new track between Goulburn and Yass coupled with a branch line to North Canberra. It was called the Bicentennial High Speed Rail proposal and was noted in the 2001 Australian Rail Track Corporation Track Audit. Although his proposals were again too ambitious for the NSW government and its rail system, Queensland proceeded to build over the next 15 years many kilometres of rail deviations to modern engineering standards.

In 1982, Ian helped to set up the National Committee on Railway Engineering or NCRE of IE Aust and was NCRE Chairman in 1983. During the 1980s he organized and led many NCRE Study Tours on Railway Engineering, including to Europe and New Zealand.

Before others had proposed an inland rail route between Melbourne and Brisbane through Parkes and Moree, in 1985 Ian suggested that if a new rail tunnel then proposed under the Toowoomba Range was wide enough for standard gauge and high enough for double stacked



containers, it would make a good start for an inland route. The 2006 North South Rail Corridor Study endorsed this route, which is now subject to further study. One day, his concept will be realised.

Ian was the author of many technical articles and four books on rail safety published by Engineers Australia. The first, edited by Richard Hope OBE CPEng MIEE MIMechE was 'Railway Safety - Brakes'. A review by *Railway Gazette International* (October 2000) noted "Ian Macfarlane has written what is beyond question the most comprehensive analysis of rail safety fundamentals ever attempted. It taps a rich vein of personal experience that spans the globe, and covers manufacture as well as operation. Unlike the tonnes of paper generated by formal safety procedures, it is eminently readable, not to say colourful. There can be few in the industry who would not benefit from the insights it contains." (See also review *Rail Horizons* (April 2001) by Chris Venn-Brown)

Not content with one book, and despite dealing stoically with cancer and its side effects, Ian turned to writing more books. Next was 'Railway Safety - Block Safeworking'. *Rail Horizons* (March 2003 review by George Nikandros) noted "It covers the full range of safeworking systems in use today by railways in Australia, United Kingdom and North America. Through the use of accidents, Ian provides insight as to not only the operation of these safeworking systems, but also to their flaws. Understanding why rail accidents happen goes a long way to explain why the modern safeworking systems in use today came to exist."

Then followed 'Railway Safety - Interlocking and Train Protection' in 2004 and 'Railway Safety - Rolling Stock: Crash, Derail, Burn' in 2006. His expertise in rail safety was further demonstrated with his being appointed as an advisor by the NSW State Coroner on the 1990 fatal train collision on the Cowan Bank near the Hawkesbury River and being a witness to the Royal Commission of the Inquiry into the 1999 Glenbrook Rail Accident.

Ian was honoured in 2006 with Life Membership of the Railway Technical Society of Australasia for his outstanding and sustained contribution to NCRE, RTSA and the railway industry. He was also an active member of other learned societies and an ardent member of railway modelling groups.

As well as being a prolific author, and contributor to magazines and the Australian Encyclopedia, Ian was generous in his assistance to other writers. His keen interest in railways from an early age carried through his career to an active retirement. Australia is richer for this interest in railways along with his hard work.

Ian is survived by his wife former wife Rosemary, and three children Margot, Ross (an electrical engineer) and Cathy.

Philip Laird, Wollongong

NEWS

The View from across the water.....

It is a rare event to attend a transport conference where a Prime Minister speaks and/or the Minister for Transport stays for most of the conference. Yet both occurred at the conference '**Transport - the Next 50 years**' held late July at Christchurch New Zealand. Excerpts from the address by the Prime Minister Rt. Hon Helen Clark MP to the conference follow:

One thing is for sure; the era when transport planning focused excessively on building infrastructure to service the private motor-car is coming to an end. Today the focus is shifting to how to plan integrated and diversified transport systems, in which many modes play their part.

... congested cities impede the efficient movement of people and goods, and provide unpleasant, unhealthy, and unsafe living conditions.

... For close to a decade in the 1990s, the government of the day had failed to invest adequately in roading and public transport, while our rail network was run down.

Turning that round ... is the New Zealand Transport Strategy, launched in 2002, with the vision that by 2010 New Zealand will have an affordable, integrated, safe, responsive, and sustainable transport system, which contributes to New Zealand's

economic development, as well as to our social and environmental goals.

This strategy represented a fundamental change in the way New Zealand governments planned a transport program. It was the first time that all the modes of transport - road, rail, sea, and air, and the active modes which are sometimes forgotten, like walking and cycling - were looked at in an integrated and long-term way.

Now that the strategy is five years old, the Minister of Transport is leading work to refresh it, so that we can be sure that it addresses emerging issues and trends, and has a greater focus on implementation.

Now we are engaged in major investment in the rail network - including in Auckland and Wellington where rail has the potential to play a much greater role in public passenger transport, and certainly will in Auckland with double tracking and electrification.

We also announced new policy in this year's Budget to enable regional fuel taxes to be introduced to fund specific transport capital projects, which would not otherwise be able to be funded within a desired timeframe.

A ten cent a litre regional fuel tax on petrol and diesel in Auckland, for example, would raise about \$120 million a year, and service a debt of about \$1.5 billion over 30 years.

I believe that the sustainability challenge is a defining issue for the twenty first century.

How nations grapple with that challenge will not only have a significant impact on the world's environment, but will also determine whether they themselves can prosper and sustain their way of life.

That's why I've issued the challenge that New Zealand aspire to be a truly sustainable nation and be the first country in the world to become carbon neutral.

Sustainability is a term most commonly applied to the need for sound environmental policies. But it is a concept I believe we also need to apply across economic, social, and cultural policies too. Those are the four pillars of a sustainable nation.

The four pillars are mutually reinforcing: we cannot build a strong economy on a society where too many are left to fail, and where we plunder the natural environment for short-term gain.

Conversely we cannot build a strong society on an economy that fails to generate the wealth required to fund opportunity and security for our people, protect our environment, and develop our culture.

Once you take a broader view of sustainability, it becomes clear that we have a once in a generation opportunity to improve our way of life, our standard of living, and the state of our environment by putting sustainability at the heart of our thinking and decision making - as we must do with transport policy.

Like other speeches given by New Zealand PM Helen Clark the word 'sustainability' features often. The fact that rail is perceived as sustainable is one reason why, as per the opening speech of the Minister for Transport the Hon Annette King MP, rail received a welcome boost in funding. To quote "Budget 2007 provided \$600 million over six years for the Government's contribution to urban rail development projects in Auckland and Wellington, including electrification in Auckland and upgrading of neglected infrastructure and purchasing of new rolling stock in Wellington."

With the measures announced, including fuel taxes, Auckland should have electric trains by 2012 (and possibly before Adelaide). It would be good to be able to go to a transport conference in Australia with an address by the Prime Minister with a similar focus on sustainability and rail.

Philip Laird, University of Wollongong

QR on the ropes

With the ongoing stoush with coal producers over supply chain problems, changes at the top and murmurings of possible privatisation, QR had come in for unprecedented scrutiny in recent months.

New CEO, Lance Hockridge, scheduled to take up his new position in early November will certainly have little time before having to tackle a number of these issues head-on. Mr Hockridge was previously North America president of BlueScope Steel, a position which includes responsibility for BlueScope's European and Middle East operations.

Following the release of the O'Donnell Report covering the problems facing the Goonyella Coal Chain, the media has been quick to point the finger at QR. Some journalists have attempted to blame the entire estimated \$1 billion annual supply chain loss on the reliability of QR's locomotive fleet. Careful reading of Stephen O'Donnell's report and recommendations, suggests that there is somewhat more behind the crisis and that while QR is the main focus of his findings, there are other non-rail related issues within the supply chain that need to be addressed.

The report does go on to say that the current bottleneck in the system is lack of rail rolling stock capacity. However, if there were just two more train sets in the Goonyella system, the focus would shift to the inability of the two unloading stations at the port to cope with demand.

Responding to the Report, Acting QR CEO, Stephen Cantwell said "The Report provides a clear and independent picture of the complexity of the supply chain and the constraints that have emerged. The Report clearly reinforces the need for shared responsibility and identifies issues of past performance and future improvement for all parties - QR, the mines and ports.

Mr Cantwell said it was important to recognise QR's long-established \$2.5 billion coal investment program supported and funded by the coal industry either through the Master Plan for track infrastructure or revenue from haulage contracts that support rolling stock purchases.

The Goonyella system will benefit from key capacity upgrades including an additional train set in November this year and a second in February 2008. QR will also complete the \$110m third unloading track at Dalrymple Bay Coal Terminal (DBCT) in November.

Over the last ten years, QR has grown its coal tonnages in Queensland from 96mtpa in 1997/98 to 164.7mtpa in 2006/07. During this period and in a competitive market, the transport cost per tonne for customers has been halved. Interestingly, while tonnage through Dalrymple Bay BCT was steady at 50.8mtpa in 2006/07, overall Goonyella system tonnage grew by 6.4% to 87.7mtpa. I guess the media missed that one.

RTSA Professional Development Initiatives *(continued from Page 1)*

Graham Gosling indicated that Thiess recognizes that a career is not linear and the objective of its development programs is aimed at "Building employee capability with Thiess". The program encourages the individual to help plan his or her career through a wide range of experiences. The Thiess training encourages a portfolio of skills including project management skills to maximize choices for individuals and the company.

Alex Howie outlined the QR graduate program which extends throughout the first 12 months of service for newly recruited graduates. This combined with a professional development program (PDP) that spans 6 years for specific development in chosen skills. Rotation is an important part of the PDP. QR also organizes a number of specialist courses to up-skill its staff.

Garry Whiting from the Australasian Railway Association (ARA) detailed the activities of the Rail Skills and Career Council (RSCC) which are directly aimed at effectively addressing the skills shortage within the railway industry.

Geoff Walker (VicTrack) discussed the RTIIC and detailed the industry-based graduate training program that it has developed. This program can be applied to the full range of railway disciplines at all levels. The program relies on development through rotation and mentoring.

Steve Dilli from Engineers Australia (EA) was the final presenter at the Melbourne symposium. He explained the details of the Professional Development Assessment Program (PDAP) that EA has developed in conjunction with RTSA for the railway industry. He also detailed the steps, including the recording and submission of Career Episode Reports (CER), towards attainment of professional recognition including Chartered status.

A number of issues were discussed and highlighted during the discussion which followed the presentations:

- Fragmentation of the industry has made it difficult to get a consolidated view and there is a continuing need for data to support policy and implementation;
- Proliferation of standards across the nation has fragmented the engineering effort;
- The skills shortage consists of two parts -
- A shortage of new entrants to the engineering profession in general, plus fierce competition amongst all industries for their services and
- The loss of a generation which means that gathered knowledge has largely dissipated to become pretty well irretrievable;
- Some skilled professionals not previously involved in the industry, for example from the declining manufacturing industry, can be readily trained to fill gaps in the railway industry;
- Overseas staff are increasingly being employed due to the lack of trained staff within Australia;
- Improvement of the attractiveness of the industry is probably the most important requirement necessary to address the quantity and quality of the required skills.
- From the presentations at the symposium, it would appear that there is a great deal of recognition within the rail industry that there is a skills shortage and there are many good programs already in place for professional development.

All in all the first RTSA Symposium on Professional Development has achieved its objectives of identifying the characteristics of the various training and development programs offered within the railway industry. Further it facilitated discussion aimed towards the improvement of current programs.

Professional Development Assessment Program (PDAP)

The RTSA, in collaboration with Engineers Australia, has developed a program that will assist young graduates within the railway industry to acquire practice competencies and to gain peer recognition.

The new Professional Development Assessment Program (PDAP) has been designed specifically for the railway industry and it will provide a structured framework for training and for mentor support. The PDAP focuses upon the competencies gained during training and development and it will provide for benchmark assessments. The PDAP will also be a mechanism for the achievement of professional recognition, including Chartered status.

The RTSA is the first industry-based organization to offer such a structured professional development opportunity for

the whole of an industry sector through Engineers Australia. The goal of this initiative is to lift the professional standing of the industry and develop the skill base for the future of the industry. The program will be open to all RTSA members and potential members. Workshops offered as part of this program will address the processes involved for both young and experienced engineers. The PDAP workshops will assist the participants to identify competencies gained during development processes and the documentation of them in Career Episode Reports. The workshops will also provide assistance with Mentor support. The PDAP workshops will be conducted as part of the RTSA's on-going Continuing Professional Development (CPD) program of technical meetings conducted in each State by RTSA Chapters. RTSA corporate members will also have the opportunity to participate in the Program.

At the launch of the Program Ravi Ravitharan, RTSA Executive Chairman, stated that while many larger organizations in the railway industry offered graduate development programs, the fragmentation of the industry demands an initiative such as the PDAP to provide development opportunities for all participants in the industry, particularly those professionals in smaller organizations.



The new PDAP was formalized at the RTSA Professional Development Symposium in Melbourne on 19 July 2007 by Dr Maurice Allen, Director, Education and Assessment, on behalf of Engineers Australia. Dr Allen congratulated the RTSA for its vision in providing this development opportunity as part of its on-going commitment to the development of RTSA members and the railway industry as a whole.

- For additional information on the RTSA professional development initiatives please visit the RTSA web site www.rtsa.com.au or contact Ravi Ravitharan on **03 9905 1986** or ravi.ravitharan@eng.monash.edu.au

Society and Chapter News



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Western Australia

7th to 10th September 2008

In 2008, the Railway Technical Society of Australasia (RTSA) will be hosting its biennial Conference on railway Engineering (CORE), a major event on the rail industry calendar.

The conference theme, RAIL - THE CORE OF INTEGRATED TRANSPORT, will highlight the successful role of rail in integrated transport systems in both urban travel and freight contexts.

The conference theme will put the spotlight on high volume bulk freight and the role of rail as an integral and integrated component of the export supply chain, and how the successful interface between transport modes and stockpiles is critical to success.

Similarly, in an urban environment, the successful use of rail depends on an integrated land use and transport planning approach - land use planning that encourages the use of public transport, and positions rail as the core of a successful urban transport system.

The conference organising committee, chaired by John Goodall, is well advanced in planning for the conference.

Sponsorship prospectuses sent recently to potential sponsors and exhibitors have achieved an excellent early response. ARTC; ARG, a QR Company; WestNet Rail and the Public Transport Authority of WA have already committed to the four Platinum level sponsorships. A number of other sponsorships have also been committed.

The conference technical committee issued the Call for Paper Abstracts on September 3 and is expecting a strong response. A direct email canvass was sent to RTSA members on September 7. Advertising in magazines and further direct email canvassing is planned over the next few weeks. The closing date for abstracts is 30 November 2007. The technical committee has now commenced detailed planning in preparation for the abstract submissions.

Planning for a 2 day technical tour to Rio Tinto's facilities in the North West is well advanced. This tour will be able to accommodate 35 delegates. It is hoped that similar tours can be arranged to BHPB and FMG facilities.

The new conference website was launched on September 3. The website includes a video to provide a preview of the city of Perth, the conference itself, the conference venue and the technical tours. The Sponsorship Prospectus is available on the website. Paper abstract submissions can be made on-line through the website.

As the conference date draws closer, the conference website will keep potential attendees up to date with progress.

Potential delegates, exhibitors and sponsors are invited to register their interest in CORE 2008 by submitting details to the conference website at www.CORE2008.org or by registering with the conference organisers by emailing info@eventedge.com.au.

www.CORE2008.org

RTSA ENGINEERING AWARDS

RTSA 2007 YOUNG RAILWAY ENGINEER AWARDS

The RTSA Young Railway Engineer Award for 2007 has been awarded jointly made to Mr Daniel Martucci and Mr Daniel Behzad Fatahi.

Mr Martucci is Engineer Rail Planning and Investment, in the Policy and Planning Division of the South Australian Department of Transport, Energy and Infrastructure and is involved in strategic planning for railways in South Australia. He graduated from the University of South Australia as a Bachelor of Engineering and holds also a Bachelor of Applied Science degree. He is Secretary of the SA/NT Chapter of the RTSA and is a Special Interests Representative (designate) of the RTSA Executive Committee. Daniel (seen with RTSA Awards Committee Chairman, John Dring and SA Chapter Chair, Duncan McLeod) was presented with his award at the general meeting of the SA Chapter held on 5 July 2007.



Mr. Fatahi is a PhD candidate and a researcher in the Centre for Geotechnics and Railway Research at the University of Wollongong and his doctoral research is associated with the potential improvements to soft foundations of railway track using native vegetation. He holds a Master of Engineering degree awarded by the Tehran University of Politechnique, being top of his graduating class and also is a Bachelor of Engineering, a Member of Engineers Australia, a Member of RTSA and a Member of the Australian Geomechanics Society. Behzan was presented with his award by outgoing NSW Chapter Chair, Bill Laidlaw at a lunchtime meeting of the NSW Chapter on 3 July.

2008 RTSA ANNUAL AWARDS

In **2008**, the Railway Technical Society of Australasia is calling for nominations in five categories being;

- The Individual Award;
- The Biennial Industry Award;
- The Young Railway Engineer's Award
- The Railway Engineering Student's Award
- The Contact Mechanics Award



The Contact Mechanics Award is a newly introduced Award, which has been initiated following the successful CM2006 Conference held in Brisbane in 2006. It is designed to encourage interest in wheel-rail interface issues that are critical to safe and reliable railway operation.

Further details about these awards, together with nomination information, previous winners and guidelines, can be found on the RTSA website at www.rtsa.com.au/awards

Nominations close on **Friday 29 February 2008** for the first three awards.

However, the Railway Engineering Student Thesis Award and the Contact Mechanics Award close on **Friday 2 November 2007**. This will require final year students to submit their nominations before the end of the final semester of the calendar year. Theses completed in either **2006 or 2007** may be nominated for the 2008 Award.

Victoria and Tasmania

The Victorian Chapter has been busy helping with the organisation of the first of the Professional Development Program Symposiums but has also maintained the on-going program of meetings including the AGM.



Attendees at the first RTSA Professional Development Symposium in Melbourne

I have pleasure in announcing the re-election of the committee with the exception of Wilson Wong, who will be travelling to Europe early next year and was unable to accept a nomination. I'd like to personally thank Wilson for his time on the committee and for his hard work in helping to organise the Symposium and his efforts as the Special Interest Representative. Ravi will report separately on the Symposium. I'd also like to welcome Martin Hunt, a rolling stock engineer with WorleyParsons onto the committee who will provide some balance in what has been an influx of infrastructure based personnel in recent times.

Our meetings have included:

- Rob Barnett - CEO VLine Passenger - who spoke of his experiences in VLine as a recent recruit to the railway industry and the enjoyment he is getting from the expansion of services provided by VLine following the Regional Fast Rail project.
- John Barry - DOI/VLine Passenger - who spoke about the restructuring of the Regional Network in Victoria in which the government has bought back the network.
- Geoff Walker - Department of Infrastructure - who outlined the program to upgrade hundreds of railway crossings in regional Victoria.

The program for the remainder of the year will be:

- The status of Public Transport Safety in Victoria presented by Alan Osborne
- Update on ARTC's Tottenham and Southern Improvement Alliance in Victoria - Andrew Cole
- Christmas function hosted by GHD Pty Ltd.

I look forward to seeing as many of you as possible at AusRAIL in December.

Martin Baggott, Chapter Chair

New South Wales

The lunchtime venue and time for the NSW Chapter meetings are proving to be successful. Our numbers have been up, compared with the evening meetings at Chatswood. We will be looking to continue with this location and time slot in the New Year.

We have enjoyed a number of interesting presentations lately. Siemens gave an interesting talk on the features and performance of the new Combino Plus tram in August. Also in August the RTSA was pleased to attend and endorse the joint IRSE and PWI meeting. This meeting was also the PWI's annual general meeting.

This joint meeting was very well attended with Michael O'Rourke and Kerry Christie from John Holland Rail on Turnouts & Innovations and Rob Smith, ARTC Train Control Project Manager on the ARTC Train Control Consolidation in NSW.

Many of the RTSA members are also members of the PWI or IRSE. The NSW RTSA is continuing to work with the PWI and IRSE to co-ordinate our activities and where possible deliver joint initiatives. It was pleasing therefore, along with Bill Laidlaw to meet with Mark Harris and Peter Boonstra of the PWI on 30 August, to brief the PWI on upcoming RTSA events and to share ideas. We have agreed to co-ordinate calendar events so they do not conflict with each other's activities

Our September meeting was also well attended with approximately 40 people. The talk was given by the ARTC on the recent flood damaged Hunter Valley track.

The AusRAIL Plus conference and exhibition at the Convention Centre from 4-6 December will be a major event for rail this year. With support from ARA, RTSA, IRSE, RTAA and ARIC this will be an exciting event for the rail industry. The NSW RTSA Chapter warmly welcomes interstate members to Sydney, and hopes to catch up with as many of you as possible.

Just a reminder to members of Engineer Australia, that attendance at RTSA meetings and events go towards Continuous Professional Development, and we commend EA members to register these events in their CPD diary.

Andrew Honan, NSW Chapter Chair

South Australia

The South Australian Chapter continues to provide a varied and well-attended programme of monthly meetings.

The meeting on 5 July featured Andrew Howey of Bombardier, on developments in passenger rolling stock. This interesting presentation highlighted how “globalised” the rolling stock supply industry has become, with standardised designs and a minimum of modifications to meet individual purchaser requirements.

On 2 August, Bert Easthope, Managing Director of Genesee and Wyoming Australia Pty Ltd, described his company’s operations in South Australia. The parent G&W is a switching and regional railroad company, with operations in the USA, Canada, Bolivia and Australia. It has 2,430 employees worldwide, including 210 in this country. Local operations are varied, including the Eyre Peninsula narrow gauge network, OneSteel’s railways at Whyalla, the Penrice stone train, provision of rail services for FreightLink’s operations to Darwin, and crewing and hook-and-pull for other operators. Indeed a diverse mix.

The September meeting (on 6/9/07) comprised the annual joint event hosted the Institution of Railway Signal Engineers. Malcolm Menadue described the innovative in cab activated points system (ICAPS) installed between Port Augusta and Kalgoorlie. This system, a joint initiative between ARTC and Pacific National, but available to all rail operators on the corridor, enables train crew to set crossing loop points remotely from the locomotive cab. This results in significant savings in train running time and in fuel consumption, as well as improving OHS aspects.

Forthcoming meetings for the remainder of the year include, in October, a presentation from Peter Jaehne from FreightLink on the Alice Springs – Darwin railway, six years on.

Our annual dinner meeting, to be held this year on Tuesday 27 November, will feature as guest speaker Mr Jim Hallion, CEO of the South Australian Department for Transport, Energy and Infrastructure. The presentation will consider strategic directions for railways in South Australia.

Full details of Chapter activities, and summaries of meeting presentations, are contained in the informative monthly newsletter, published on the RTSA website.

Duncan McLeod, SA Chapter Chair

Queensland

The Queensland Chapter have held three presentations during the quarter.

27 June 2007

Dennis Walsh is the Program Director for SEQIPRail at QR. The South East Queensland Infrastructure Plan (SEQIP) is the \$66 billion blueprint outlining two decades of road, rail, water, energy, health education and community infrastructure improvements. Dennis outlined the rail component of the program, the project delivery

strategy, the selection process and the current health of the program. (*Attendees 39*)

26 July 06

With the AGM Dinner in its third year and the combined AGM Dinner and Trivia Night in its second year, it is now officially a tradition. With the majority of the current committee electing to continue for another year, we also welcomed Andrew Matthews from GHD and Sekar Dhanasekar from Central Queensland University to the Committee. A successful evening was enjoyed by some 90 attendees at the Irish Club and our thanks go to all our sponsors for their support and prizes for the evening. I would also like to thank the RTSA committee for their considerable time in organising the evening. With the success of the evening, it is heartening to see such support for the RTSA across the industry and across the regions. (*Attendees 90*)

22 August 2007

Kim Harley from Harsco Track Technologies covered several areas relating to QR’s purchase of the new Stoneblower. This included an overview of the concept of measured shovel packing and how this is different from Tamping, QR’s use of their new machine and how this application varies from other applications in the UK. (*Attendees 26*)



Upcoming Events

The Queensland Chapter has a number of interesting presentations to bring the year to a close.

The next presentation in September is an interstate guest, Damon Honnery from the Rail CRC and the Department of Mechanical Engineering at Monash University in Melbourne. With the current growth in fuel consumption and the need to improve fuel efficiency in the rail industry, Damon discusses solutions based on additives and alternative fuels.

Other presentations include incoming CEO of the Rail CRC, David George in October who will discuss the strategic direction of the Centre. Also, in line with our presentation in Rockhampton last year, we aim to maintain our links with regional members. To this end, we move further north this year to Townsville. For this presentation, Marcus McAuliffe from Pacific National Queensland will outline their start-up and operation in Queensland.

Mark Wishart, Queensland Chapter Chair

Western Australia

Following the Dinner Meeting held at the Convention Centre in May the WA Chapter has had a relatively quiet program.

The technical presentation was held on Thursday 26 June and featured the development and management of the Perth Transport Authority Electronic Ticketing System, with the presentation delivered by Mr Mike Somerville-

Brown, Project Manager for the SmartRider system. This system is now functioning in the Perth Urban transport scene and covers passenger movements by train, bus and ferry. It has the capacity to record each individual journey and interface between the respective modes. In the order of 20 attended the meeting which was well presented and provided a detailed view of the system and its application in the urban transport scene.

Some difficulty was experienced with the responses from members to attend the site visit to the Nowergup Rail Car Depot, north of Perth due to the failure of an e-mail connection. As a result all the member applications were not received and the trip was cancelled. Several members did attend the venue and enjoyed a modified tour through the facilities. It is intended to repeat the inspection in October.

Three more meetings remain for the year, the first of these being on Thursday 27 September, when Chapter Chairman, John Syers will provide a presentation titled "Tourist Railways – Can They Survive?" This session will discuss the background to the WA Tourist Railways including the management, infrastructure maintenance and some of the challenges faced by these railways.

A repeat of the site visit to Nowergup Rail Depot cancelled earlier is being considered for Thursday 25 October and an advice will be issued to members in due course to confirm the arrangement.

John Syers, WA Chapter Chair

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National & International

- 30 November Call for Abstracts (Close) - CORE2008 (September 2008 in Perth)
13-15 November AsiaRail 2007, Grand Hyatt, Singapore
4-6 December AusRAIL Plus 2007 – Sydney Exhibition & Convention Centre

NSW Chapter

- 7 November Minto - Enfield - Port Botany Freight Shuttle Services, Morgan Noon, Logistics Manager, Sydney Ports Corporation. (Lunchtime Meeting)
8 November 25kV Electrification in Queensland and Western Australia. Jerry Jirasek, Downer EDI Rail
December No meeting due to AusRAIL Conference in Sydney

South Australian Chapter

- 1 November Adelaide tram extension. Max Shuard, Max Shuard & Associates Pty Ltd:
27 November Annual Dinner and AGM. Strategic directions for railways in South Australia. Jim Hallion, CEO SA Department for Transport, Energy and Infrastructure

Western Australia Chapter

- 22 November Annual General Meeting. Update on progress WestNet Rail since purchased by Babcock Brown Infrastructure (speaker to be confirmed).

The above program is subject to last minute changes. For additional information on the RTSA and its activities, including the symposiums on Professional Development, please visit the RTSA web site www.rtsa.com.au or contact the secretariat on (02) 6270 6548.

POSITIONS VACANT - RTSA Professional Development Initiatives

Wanted - RTSA PDAP Coordinator

As seen elsewhere in *Rail Horizons*, RTSA has implemented a Professional Development Assessment Program (PDAP) designed specifically for the railway industry. The aim of the Program is to improve the standing of railway professionals and to help the railway industry to address the critical shortage of skilled work force.

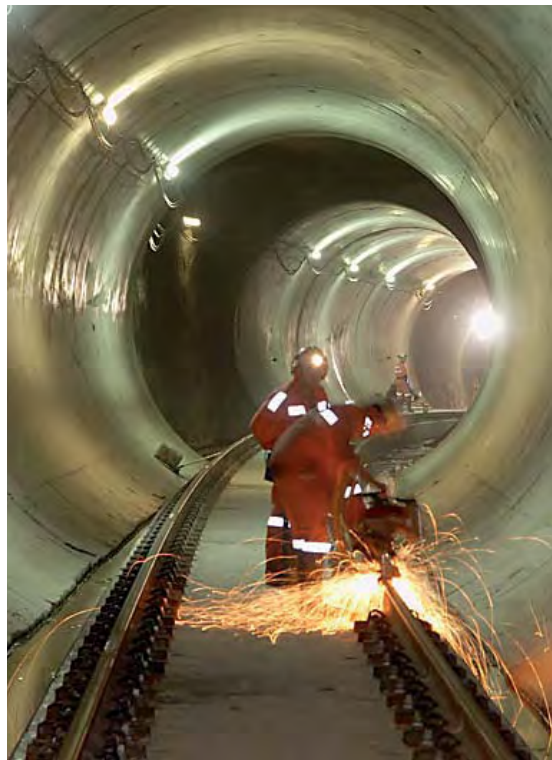
RTSA is currently seeking assistance from a **retired or semi-retired railway professional** to coordinate and manage this program. RTSA will be happy to partially remunerate for the effort involved in this role.

Wanted - Mentors

RTSA is currently seeking expressions of interest from experienced professionals to assist with RTSA's mentoring program to young graduates joining the railway industry.

Play your part in shaping the future of the railway industry

If you are interested in either of these roles please contact Ravi Ravitharan on **03 9905 1986** or ravi.ravitharan@eng.monash.edu.au



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Current rail projects

PB's current major rail projects include:

Cronulla Line Duplication Project

PB is undertaking detailed design to duplicate the existing single track sections on the Cronulla Line, including new station and stabling facilities. The project will provide a significant increase in train services and amenities for the people of the Sutherland shire.

Surat Basin Railway

PB is leading a feasibility study into a new 200 km rail link through the Surat Basin in South East Queensland, to permit coal traffic from the Dalby area to proceed directly to the Port of Gladstone, without the need to travel through the Brisbane metropolitan area. This will provide great benefits to the residents of Brisbane as well as open up possibilities for development along the new corridor.

Inner City Rail Capacity Study

PB is leading a study which looks at the development of the rail network in inner Brisbane and South East Queensland. The study will identify and assess options for the future development of the inner city rail network, to ensure that the rail system continues to serve the needs of Brisbane into the future.

Sydney Clearways, Signalling Engineering Team

PB is providing the Transport Infrastructure Development Corporation with a signalling engineering and design team to develop the signalling for all projects within the Clearways program. PB's team is performing a vital role in developing the signalling to ensure that each Clearways project works harmoniously with the remainder of the RailCorp network and will deliver real improvements to Sydney's rail network.

North West Rail Link

PB is the technical advisor for the pre-feasibility and feasibility studies for the new North West Rail Link. PB has produced a clear scope definition outlining key risks and issues and developed a project review report which has been submitted to Cabinet for funding approval. The North West Rail Link will provide a vital transportation connection for the residents of this booming development area.

Dynon Port Rail Link

PB was Design Engineer for the rail works associated with the Dynon Port Rail Link. This \$120 million project is the key to a major upgrade of Melbourne's port facilities and involves lifting one of the busiest roads in Melbourne above a new rail link into the port. This work will eliminate the traffic congestion that currently occurs due to trains crossing Footscray Road.

