

From the Chair

This will be my last report as National Chairman of the RTSA. The time of my tenure will come to an end at the AGM to be held during CORE2002 at Wollongong in November this year. The last two and a half years have gone very quickly and have been filled with many memorable moments and events.

On a personal basis, the change from being a state government employee with TransAdelaide, for some 19 years, to employment with John Holland Pty Ltd's Rail Division has been a major step in my life. It certainly correlates to what has happened in a lot of areas where railway ownership and management had transferred from Government control to private industry, where value for money, return on investment (profit) and customer/client service and satisfaction are certainly the major driving forces.

The RTSA Chairman's position continues to be very challenging. Not only is the Chairman involved with all the various RTSA activities, which I will touch upon later in the report, but is also seen to be an asset to be utilised by the IEAust. As you all know the RTSA is a "technical society of the IEAust" and is just one of such 32 technical societies. The various Chairs of these societies form a Societies Consultative Committee which provides input and advice into the activities and decisions of the IEAust. The IEAust is currently reviewing a number of policies, in particular "Sponsorship, Resource allocation", "Technical Society Guidelines" and, one in which I am on the working party for, determining if a "Trading Name" should be adopted by the IEAust. I encourage all of you to make yourself acquainted with these issues and provide input and express your opinion on all of the above. One pleasing result from the review is in the area of insurance of office bearers of Societies. Previously insurance for office bearers was only available to IEAust members. But after closer discussion with the Insurer it was resolved that the IEAust insurance now covers all office bearers, regardless of their membership status with the IEAust, as long as they are engaged on bona fide Society business.

The RTSA has certainly been active on your behalf over the last two years. This is due to the hardworking members of the National Committee, the five state chapter

committees and also the CORE2002 organising committee. It is very encouraging to see that each state is holding regular informative meetings that continue to provide professional development and networking opportunities for our members. In addition the persistent lobbying undertaken by the Government Relations Committee, chaired by Philip Lard, has really paid dividends. Watch out for a special release at the upcoming conference!

The Railway Industry is certainly very dynamic at the moment. Not only do we see a vibrant marketplace with billion dollar projects under way across Australia, but there is also some excellent back up support happening that promises to strengthen rails position in the economy. The Cooperative Research Centre for Railway Engineering and Technologies is up and running and we await with interest the Governments Green paper on the "Auslink" proposal. The RTSA will be formulating a response and once again we ask for your thoughts on the matter.

I look forward to seeing as many of you as possible in Wollongong and assure you that many more activities are yet planned for the future.

Rob Schweiger
RTSA National Chairman

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POINT OF VIEW

by Max Michell

The AustralAsia Railway web site www.aarc.com.au has regular updates of progress on construction of the Darwin railway. From the start of track laying in mid April there are now something in the order of 450 km of track laid with roughly 100 km additional track each month. The rails between Tennant Creek and Katherine (630 km, which is 45% of the total 1420 km) should be joined before the end of the year, at which time there will be more rail track in the Northern Territory than has previously ever existed. The construction will then head south from Tennant Creek and north from Katherine for a further twelve months or so to complete the project. Which has to be a rather impressive performance by any standard.



This is made even more impressive when the location is considered. In an area the size of several European countries there are just a few thousand permanent dwellers in half a dozen small settlements. A port at one end and a railhead at the other are the supply points, themselves somewhat remote from the source of supply of the heavy materials and fuel required by the project.

Rails are railed from Whyalla to Alice Springs then trucked to the construction sites. Cement and reinforcing is shipped or railed over similar distances. Concrete sleeper manufacturing and rail welding is carried out at the construction depots, and is then taken in a daily construction train to the rapidly advancing railhead which can be as much as several hundred kilometres from the depot. Huge quantities of ballast are railed at the same time to bed down the track as it is laid. Even the construction trains are something to behold - 6500 tonne trains in 70 plus loaded wagons with three or four locomotives, which divide into three separate trains near the construction site. Although incomplete this project is quite an achievement, particularly when it is considered how long it has taken to come to fruition.

In another area CRT have imported two prototype Cargo Sprinter power units – effectively ruggedised versions of the European prototype suitable for Australian conditions. This small, highly flexible container train can access sidings and terminals that the ‘big train’ proponents have no interest in.

What you may ask is the common element between these two developments. Apart from the obvious one of each demonstrating that the Australian rail industry is capable of stepping outside its box, both these developments will depend on finding new markets for rail activity. The Darwin rail line covers new territory and therefore has no existing rail traffic to depend on. The billion dollar cost will need to be balanced by both shifting existing road traffic to rail, but more importantly in growing the total land transport cake along the north south corridor.

Facilitation of low volume mineral developments for instance might be one outcome. Extension of the live cattle catchment for the Darwin export trade might be another. Growing the size of the transport market for ‘retail’ trade to and from Darwin and NT regional centres is another possibility. An incidental benefit from growth of the total transport task on the north – south corridor will be downstream effects back into the existing network.

The Cargo Sprinter strength is in its flexibility for moderate volume movements. With a capacity of 15 to 30 TEU it is ideal for regional, pre-consolidation and high end markets. If for the time being we ignore the gauge problem in the Adelaide area (which may be on the way to being resolved) a Cargo Sprinter could access the Barossa and McLaren Vale regions and transfer containers to the Outer Harbor and the Adelaide Freight Centre for export and domestic respectively. At the same time it could service reasonable volumes of similar traffic to and from industries in the southern suburbs of Adelaide. In Sydney coupled sets of Cargo Sprinters could leave Botany on PortLink type services and divide along the way – one to Enfield, one to Leightonfield, one to Minto type of service, thus reducing track occupancy, reducing costs and increasing flexibility of delivery.

Regional activities are another opportunity - there are a number of places in SA for instance that generate moderate volumes of containerised traffic that up until now have been by-passed by rail. A further development proposed for Cargo Sprinter is to arrange its configuration to allow any mix of containers on a relatively short train without sacrificing capacity. This will enable the load to tare ratio to be kept high and allow train lengths to be utilised to best advantage. Once again, this technology is an opportunity to expand the reach of rail and to grow the rail cake.

When combined with the anticipated investment in the substandard East Coast network there are some bright spots on the horizon. While persevering to try and shift the political agenda to a more balanced alignment we must not

overlook the opportunities to make gains unilaterally in the big picture situation that we find ourselves in. It was no accident that Cargo Sprinter did a side trip to Boree Creek while it was undertaking its accreditation trails. New technology, new activity, new ideas are attractive to the political world and the inhabitants of that world are groupies to the good, new and successful. If we want to succeed in the longer term we need to provide those turn-on factors. Our industry motto should be "We can do it" rather than "they should do it". Keep that in mind next time you are engaged in the more difficult, unpleasant or less unproductive parts of your role in the rail industry.

RTSA Government Relations Committee

- An earlier submission to the Federal Department of Transport's East Coast Very High Speed Train study has been revised to take into account the Stage I findings of that study.

The new submission is restricted to Newcastle-Sydney-Canberra-Melbourne, and has been sent to relevant Governments (Federal, NSW, ACT and VIC). In brief, it proposes the "Queensland Option" (as also favoured by the State of Washington in the mid-1990s) of using passenger tilt trains on upgraded tracks. We believe that this option, which is similar to no fewer than four tilt trains proposals invited by the Federal Government in 1997 for Sydney-Canberra, should have been examined by the East Coast VHST study. Accordingly, we have asked the Federal Government to fund a new study. The updated submission is on www.rtsa.com.au

- Like several other organisations, we have been awaiting the release of the promised Green Paper on AusLink, and shall make a submission. In the meantime, we have also requested Federal funding for advanced planning for major mainline track upgrades.

The State Road Authorities have had Federal funding for years for advanced planning of major upgrades of the National Highway System (including \$10 million in 2000-01 for planning of the Western Sydney Orbital now due for completion in 2007). AusLink cannot work properly in evaluating major proposals from all transport modes unless each proposal is properly planned and costed.

(Interestingly, in an a recent interview in the *Australian Financial Review* of 16.9.02, Federal Transport Minister John Anderson said that the government would not be increasing its financial commitment to the rail sector. Rail infrastructure funding would be at the same proportion of GDP as exists now.)

- RTSA has also been awaiting a somewhat overdue agreement between the NSW Government and the ARTC for the long-term lease of some track. As per our 2001

Submission to the Productivity Commission's inquiry into the National Access Regime, if this agreement cannot be reached under the guidance of the Federal and State Transport Ministers, it should be referred to COAG. This would be with a view to expediting the agreement.

- In other delays, the final report of the Productivity Commission's inquiry into the National Access Regime was completed on 3 October 2001. Under Federal law, it was due for release within '25 sitting days' of Parliament which was 6 June 2002. On 17 July, Alan Mitchell of the Australian Financial Review (AFR) called for its release. This was followed up by the Australian Gas Association (AFR letters, 6 August) who also made the point that an access regime 'must achieve a better balance between short-term benefits, and the long term benefits'...of upgrading infrastructure.

In winter 2002, RTSA lodged two Freedom of Information (FOI) requests to Treasury for release of the report. Treasury denied these requests on grounds citing FOI legislation and the report was released on 17 September 2002. The report on page 78 notes, an RTSA comment re negative impacts of access regimes that:

"... failure to devise an 'acceptable' access regime which is fair to track owners has been used to deny much needed interstate track investment. The longest standing failure has been that of the NSW and Federal Government authorities to agree on access arrangements for NSW mainline interstate track."

If the Federal Government accepts its responsibilities to assist in improving mainline interstate track, some delay is acceptable. However, extended delays are costing Eastern Australia dearly with more costs (National Highway System, road trauma, air pollution etc) due to increased inter-capital long haul trucking.

- RTSA has made a brief submission to a current House of Reps inquiry into cost shifting to Local Government. Our submission looks at some of the additional road costs imposed when railway branch lines close etc. A copy can be seen at www.rtsa.com.au or www.aph.gov.au/house/committee/efpa/localgovt/subs.htm

- RTSA has been seeking rail industry and government support for the production of a National Rail Projects Benefit Cost Manual. The road authorities have had a Benefit Cost Manual for years, the current Austroad version goes back to 1996.

Philip Laird,
Government Relations Committee

CORE2002

Conference time is now drawing close and we hope that you have already registered. If you have mislaid your copy of the registration brochure, then another copy has been included with this Newsletter. If you have already registered please pass this copy on to a colleague who may be interested in attending.

We are looking for a large attendance at CORE 2002, and the support from our sponsors and exhibitors has been excellent, and for this we thank them all, for without their help the conference could not succeed.

The conference will be opened by the Hon Tim Fischer in his capacity of Special Envoy for the Adelaide to Darwin Railway. Our keynote speaker will be Mysore Nagaraja who is the chief engineer of the New York City Transit Authority and he will speak on the New York network with special regard to the handling of the system after the September 11 tragedy.

On Monday evening we will be holding an informal dinner with our sponsors and exhibitors, where we all join in around the exhibition booths, and we will encourage the exhibitors and delegates to dress up in old railway regalia to give a real railway atmosphere. The entertainment on this evening will be Elliot Goblet - Corporate Comedian.

The Gala Dinner and the Railway Engineering Awards on Tuesday will be held at the Wollongong Entertainment Centre and there will be a high profile surprise guest speaker.

We are arranging a static exhibition of railway vehicles, which will be held at the One Spot repair facility at Port Kembla. This is the old FreightCorp building, and having the vehicles undercover we are not at the mercy of the weather. Amongst the exhibits we hope to have a Millennium train on display and the CRT Cargo Sprinter.

A total of 55 technical papers will be presented and the inclusion of several from overseas will provide international significance to the event.

The partners program is arranged and includes tours to the beautiful Southern Highlands on Monday and to Kiama, Berry and a visit to the famous Nan Tien Buddhist Temple in Wollongong on Tuesday.

We feel we have laid on what promises to be a very interactive and enjoyable conference at our venue North Beach Novotel Wollongong, plenty of technical content but also time to let your hair down. Our MC will be our National Chairman Rob Schweiger who will introduce our various guest speakers.

We have provided some alternative accommodation options in Wollongong and these are listed on the CORE2002 website - www.core2002.on.net and there is much other

plenty of other information there also, including ability to register online as a delegate.

We promise that this will be a conference to remember and look forward to seeing you at CORE 2002.

Les McNaughton

Chair, CORE2002 Organising Committee

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Contributions are always welcome.



The Railway Technical Society of Australasia

Australia's High-Speed Rail Future?

The current Federal Government cancelled the East Coast Very High Speed Scoping Study earlier this year, on the basis of the findings in the Final Report of Phase 1 of the Preliminary Study by consultants ARUP-TMG. The Federal Minister for Transport and Regional Services, Mr John Anderson stated on 26 March 2002 that, "to have continued with the study would have been an exercise in false hope". This is an uncritical view of the Preliminary Phase I study which raises more questions than it answers:

Were the journey times too long because times for 'limited stop' trains were estimated and a 10% (instead of 5%) recovery time allowance was made?

In the comparison with air travel (Table 7.4) why weren't the time comparisons made from CBD to CBD? Just where is the Sydney starting point that is 30 minutes by car from the station and 35 minutes from the airport?

Why were construction costs so high? Is it because they used figures from Europe (where often lots of tunnelling is involved) and for high capacity double track?

Were the environmental and political problems exaggerated?

The main market for a Very Fast Train is clearly the capital cities because their population is so many times greater than that of any of the regional centres. Sydney and Melbourne together have a population of over seven million people, over one third of Australia's population. As the Report says, every stop a high-speed train makes extends the overall journey time by a number of minutes. Why then, for the key Sydney-Melbourne service, were times with three intermediate stops ("limited stop" times) compared with direct Sydney-Melbourne air travel times. Imagine the Sydney-Melbourne air service with landings at say Canberra and Albury on every flight!

It should be emphasised however that a major advantage of a Very Fast Train system is that the capital expenditure makes available greatly improved transport services to all the regional centres along or near the route. This is because there can be a mix of non-stop, limited stops and all stops trains.

Most developed countries recognise that the VFT technology is world best practice for land transport up to 1000 km. That is why across Europe, from Sweden to Greece, countries are upgrading their classical rail lines or building new ones for trains at 220km/h or faster. Not only can rail be fast, it is also more energy efficient and less polluting than planes or cars. Sooner rather than later, Australia will have to address the extreme levels of green house gases generated by its current transport systems.

The French Railways have shown the potential of VFT with a demonstration run across France from Calais on the English Channel to Marseilles on the Mediterranean. In May 2001 a TGV (high-speed train) made the 1067 km journey in exactly 3hrs 30 min. at speeds no greater than 366 km/hour (Today's Railways, August 2001, pp24-28). For comparison, the current roundabout rail route between Sydney-Melbourne is about 960km whereas by the upgraded Hume Highway it is only 880km. The Very High-Speed Train route should be no longer than this. The estimated journey time of 3hrs 10 min for a 500km/hour Maglev train over this distance compares poorly with the **actual** time of the French train of 3 hrs 30 min for a journey 180km longer.

In a major statement "Sustainable Transport in Sustainable Cities", the Warren Centre at Sydney University (Sydney Morning Herald, July 4, 2002) has argued that the NSW State Government "should put its weight behind the case for a very high speed train and that such a train would greatly reduce the need for a second Sydney airport."

Indeed it might well be easier to gain approval for a VFT than to find a physically and politically acceptable site for a second Sydney Airport.

Sydney and the neighbouring regions hold the key to an Australian Very Fast Train.

Population growth will mandate new routes (or greatly improved segments of existing ones) to the Central Coast and Hunter, to Macarthur and the Southern Highlands and to the Illawarra, as recognised by Action for Transport 2010 and the Christie report. Whether or not an Intercapital VFT is introduced in the near future, here is the chance for rail management and engineers to take the lead. Any new construction must be compatible with fast trains. Anachronisms such as speed restrictions around sharply curved platforms and 40 or 60km/hour junctions must be absolutely out. Considerable money will have to be spent but the aim should be for the best outcome, not the cheapest.



The poor return because bad steam age track alignments were followed (especially the very limited reduction in journey times and hence in the ability of rail to increase its

share of the total intercity journeys made) from the major NSW electrification projects of the 1980's (to Newcastle

and Wollongong), must never happen again. On a modern railway an 80km journey should not take 80 minutes. That the fares are low does not compensate for poor services.

The current interstate rail lines require upgrading just as urgently for freight transport as for passengers: To Melbourne new and shorter alignments are needed south of Sydney, e.g. Macarthur-Mittagong and Goulburn-Yass. To Brisbane the cheaply built North Coast line has many sharply curved sections that are very slow and expensive to operate and ever less competitive with the massively rebuilt New England and Pacific Highways. If this line is not upgraded it will decline into irrelevance.

New alignments should be shared with the Very Fast Train services and on some sections there is no reason why fast freight trains could not use the same tracks. Electrification is not an essential first step. Diesel Fast Trains could take advantage of upgraded segments as they are opened, as is being done with Queensland's Tilt trains to Cairns.



The Preliminary Report focuses on the high total capital cost of a Very Fast Train link between Melbourne, Sydney and Brisbane. But a full double track mainline allowing for a Very Fast Train every few minutes (as used in the estimates) is clearly unnecessary in the more rural sections of eastern Australia. Also as mentioned above, considerable capital investment will be needed for rail upgrades along the route of the Very Fast Train in any case. What is needed is a financial framework that makes full allowance for the very long life span of a major railway alignment compared to that of most other investments.

Even in Europe, the High Speed Rail Network is being built as a number of separate projects which add together over decades. They have not been financed as one single giant project. For example the French High Speed Lines traversed by their demonstration run were built in five stages, the first of which has long since paid for itself. High-speed train services often use classic rail lines for part of their journeys.

In this way many more cities benefit from the investment in high-speed lines and the initial capital cost is reduced.

The Australian Very Fast Train can grow from small beginnings. All it needs is a commitment to engineering excellence and a determination to seek the development of the best, rather than the cheapest strategies, for the transport needs of eastern Australia.

Dr Rob Cortis-Jones

Emerging Issues for Rail

The challenge for rail in the coming decade will be to equip and organise for growth in the freight task. The major issues will be:

- **Infrastructure quality and capacity** – planning, establishing priorities and financing improvements and capacity expansion. AusLink has the potential to ease the long funding drought for mainline railways, but project bidding will require coordinated responses from rail firms, governments and finance providers.
- **Infrastructure access** – There is wide agreement that the processes for gaining third party access to rail infrastructure are too time-consuming, complex and uncertain. There is also concern about pricing of rail infrastructure – for some too low, for others too high, and for all too complex.
- **The operating environment** – It is not cost effective, owing to the plethora of inconsistent standards, operating practices and regulatory requirements and processes across the formerly State-based rail networks. The application of co-regulation in all States and the Northern Territory by 'mutual recognition' is inconsistent and cumbersome. What is the appropriate role of the industry in on-going development of the Code of Practice for the Defined Interstate Rail Network, and do we need a national safety regulator for rail?
- **Safety and risk management** – Publicly and politically this a hot topic, but is it top of mind for industry players? Like good corporate governance, a culture (and practice) of serious attention to safety should be accepted by all in the industry. For the present the issues of fatigue management, medical fitness and testing for drugs and alcohol are top of mind.
- **Workforce skills development** – This is not an issue which is widely discussed, and the detail has not been researched recently. As it bites across the industry, it will tend to constrain capacity and it will push up costs.

The above is a summary of a presentation made by Dr Fred Affleck, 23 August 2002, to a joint CRC/ Transport Systems Centre seminar at the University of South Australia, Adelaide.

News Snippets

Graduate Study for Rail Professionals Expanded

Queensland University of Technology and Australian Railway Research Institute are continuing to provide a new direction for railway education. The joint venture between QUT and ARRI is directed at the graduate level in a new railway environment—a multi-disciplinary business concept.

QUT/ARRI announced late in 2001 the release of the unit “Railway Business and Engineering”. In 2002 they released the second unit “Railway Management, Operation, and Safety” for graduate study for professionals (engineers, managers, operators, technical personnel) working in the railway industry, who are looking for a broader vision of the industry.

The units were well subscribed with participants from Brazil, Hong Kong, New Zealand and Australia. Both units are planned to be run again in the first half of 2003 and those who successfully complete the units can claim it towards appropriate Graduate Certificate / Diploma / Masters level study. All the study material has been written by widely recognized practicing engineers and managers, who also assist with the operation of the units and assessment of assignments.

Both units (courses) are full-fee paying and available in a self-paced, independent study mode with high quality resources supplied to participants; they are self-contained units with individual assessment. Each registrant will receive a certificate of successful completion.

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Cleaner Power in Canada

Canada’s railways produced 3.5 per cent fewer greenhouse emissions in 2000 than they did in 1990, while hauling almost 30 per cent more traffic over the same period. This is according to a locomotive emissions report the Railway Association of Canada (RAC) filed recently with Environment Canada. Improved equipment scheduling, better asset utilisation and new technology – from fuel efficient locomotives to low-idle devices to automatic start/stop systems – have helped do the trick.

RAC President and CEO, Bill Rowat said that research now being conducted by rail-industry suppliers and railroads could lead to further reductions.

Source: Progressive Railroading, June 2002.

Public Liability Crisis Hits SA Tourist Rail

Tourist and heritage rail operators in South Australia are facing a major crisis as the result skyrocketing public liability insurance premiums. The National Railway Museum (NRM) at Port Adelaide has been facing a bleak future and only a last minute offer from the local Port Adelaide Enfield Council has ensured re-commencement of narrow gauge (457mm & 1067mm) operations by the NRM at Port Adelaide and Semaphore.

NRM’s annual premium has risen from \$18,000 in 2001/02 to at least \$52,000 in 2002/03, well out of reach of the Museum’s finances. The popular 457mm Semaphore foreshore operation carries over 14,000 passengers between October and Easter each a year and contributes significant revenues to the general running of the NRM. The reduction in business activities was putting enormous financial pressure on the NRM.

Bob Sampson for the NRM said, “While we have secured insurance funding for the next 12 months, the problem is a lot more complex than many people imagine and won’t go away in a hurry. Most insurance for rail heritage organisations has to be sourced from overseas and it is unclear whether these premiums will be affected by any legislative changes that might be made in Australia.”

Flinders Ranges based Pichi Richi Railway also managed a last minute escape when their operations were faced with a \$92,000 insurance bill. Additional funding was provided by the City of Port Augusta, The Flinders Ranges Council, NRG Flinders and Mitre 10 Port Augusta to cover this year’s premium.

The Yorke Peninsula Tourist Railway (YPTR) operating between Wallaroo, Kadina and Bute SA’s Mid North has not been so lucky and had to terminate its services from 27 July when faced with an increase in premiums from \$6,000 last year to \$52,000 for 2002/03.

YPTR has been one of the ‘heritage’ railway success stories in SA, and has quickly grown into an important regional tourist attraction. As well as regular monthly trains to Kadina and Bute and has been running frequent and very popular charter services and ironically it has recently invested in two Redhen railcars to provide greater operational flexibility.

Steamtown Peterborough has also had to cease operations while other operators such as Limestone Coast (Mount Gambier) and the St Kilda Tramway (Adelaide) are closely monitoring the situation in advance of their premiums falling due in 2003.

Chapter Reports

Victoria & Tasmania

This report covers activities since March, as the due to an editorial mix-up the appropriate copy did not appear in the June Newsletter.

The Victoria and Tasmania Chapter has continued its programme of successful and well supported meetings.

Our March meeting was addressed by Michael O'Rourke (Alstom Australia) who described Alstom's current activities in Australia. It was a chance for Michael to catch up with many of his former colleagues.

Our Annual Dinner Meeting was held earlier this year (24 May) at the Savoy Plaza Hotel. It was attended by 65 people, including members and guests, making it the most successful such meeting to date. Members of the RTSA National Council, in Melbourne for their meeting, also attended. The guest speaker was Peter Strachan, the Chief Operating Officer (Victoria and WA) for National Express, the largest of the franchisees in Victoria's Public Transport. He gave an enthusiastic talk covering the "Three S's" (Service, Safety and Sustainability) and spoke of the current challenges of fare evasion and vandal damage.

The Annual General Meeting was held on 17 July at Theiss Infracore's Training Facility. The meeting was well attended, and the new Chapter Committee was elected. The new committee is:

Russell Bowey, Gerry de Bont, Philip Dunn, David Ferris (Chair), Doug Hayhoe, David Lewis (a new member), SSS (Ravi) Ravitharan, John Scott (Secretary), Russell Trevaskis and Graham Vallance. Thanks to the outgoing committee for their efforts over the last 18 months.

The formal meeting was followed by an excellent and informative presentation by John Hearsch from the Victorian Department of Infrastructure. John's presentation covered the planning and implementation of the Victorian Rail Gauge Standardisation Project that will see two thirds of Victoria's main line track converted to SG.

On 21 August, The Chapter visited Newport Workshops (EDI Rail) and enjoyed a tour of the revitalised diesel engine rebuild shop, loco overhaul shop, wheel shop, bogie shop and carriage shop. A highlight of the evening was an inspection of the new Siemens EMU trains soon to enter service for M>Train. These trains incorporate the most modern systems technology ever seen on a Victorian train, and the Chapter will invite a more detailed presentation from Siemens early next year. Our thanks to Siemens and EDI Rail Staff for their hospitality and interest. About 70 people attended, a record for our Chapter.

A new segment to our regular Chapter meetings has been introduced. At each meeting a short time will be made available to members who may wish to bring any development, question or matter of interest to the attention of other members. Members are encouraged to consider this a means of sharing interest in local and national developments.

With a great deal of investment in Rail Infrastructure and Rolling Stock now under way in Victoria, the Chapter Committee has taken the opportunity to develop the remainder its 2002 and its 2003 program focussed on these developments. Members are invited to keep themselves up to date by E-mail and regular flyers posted to them.

Date and time	Activity
Wed. 16 October 2002	Site visit to CRT Group to inspect CargoSprinter
November 2002	Presentation by eminent speaker present for CORE 2002. Mysore L. Nagaraja, Senior Vice President/Chief engineer of MTA (New York City Transit Authority)
January 29 2003	Presentation by Final Year Engineering Student, James Chuang
Feb 19 2003	Study Tour to New Zealand

The development of a Study Tour on Railway Engineering is continuing, with February 2003 the planned time. We are planning a five day tour in New Zealand, and a preliminary program has been developed by new Committee Member (and Kiwi expatriate) David Lewis. Likely cost will be \$2,000 per head, and we are seeking expressions of interest from all RTSA members, including other Chapters in our invitation.

On a sad note, we record the passing of one of our most enthusiastic members, Chris Matthews, who died on 10 May after a long and debilitating lung disease. He was 48 years old. Chris will be missed by all who knew him.

David Ferris, Chapter Chair

Western Australia

The WA Chapter has been conducting technical meetings at regular intervals and has hosted roundly 20 members and guests at each event.

The June meeting was a repeat of a successful paper presented to the Permanent Way Institute several years ago. Mr Raymond Marks updated his presentation relating to Risk Management to cover issues pertinent to the railway industry.

In August an interesting paper was presented by Dr Richard Hartley and Mr Bill Larke discussing the history and the associated engineering issues of railways developed over the nation.

A full program is scheduled for technical meetings until the end of the year with the September event having Mr Wayne Belstead (WestNet Rail) explaining the development and functions of in cab communications currently used in locomotives running within the WA system.

The 10 October meeting will allow Secretary Bill Singleton and Mr Eric Englund to present the paper proposed for the CORE in Wollongong. This will cover the proposals for the Hope Downs Railway in the Pilbara Region of WA.

The last meeting will be held on Monday 18 November when the Group will be honoured to have CORE Eminent speaker Mysore Nagaraja, Senior Vice President/Chief Engineer, New York City Transit Authority. Mysore will discuss the issues confronting the Authority following the 11 September disaster in New York.

Details of the meeting schedules can be found in the RTSA website relevant to the WA Chapter.

Plans are being made for a site visit to the works currently being carried out for the extensions to the Northern Suburbs Railway in Perth. This will be arranged for early in 2003 when the work is sufficiently well advanced.

John Syers, WA Chapter Chair

New South Wales

Student Assistance Award

At our combined meeting with the Permanent Way Institute and the Institute of Railway Signalling Engineers in August we were pleased to present the NSW Student Thesis Assistance Award to **Pele Kittiaran**, a final year Mechatronics Student at University of NSW, for his thesis titled "Vibrations of Railway Sleepers".

The work is a continuing project in determining the effects of different ballast configurations, including a new arrangement, used with concrete sleepers. From the results it will be possible to optimise the quantity and spread of ballast under and around sleepers to minimise oscillations and premature damage under varying load conditions.

Pele was thrilled to receive the award and will use money to assist his ongoing studies.

Ross Best

Our Treasurer Ross Best died suddenly on 30 June 2002 aged 70. Ross was an original committee member of our group and was very active in heritage matters with the Institution following his retirement from StateRail/FreightCorp as Principal Bridge Engineer and local Chair of the APESMA rail group.

Ross and his humour, dedication and enthusiasm will be missed at our meetings and on behalf of the committee and members, I extend our sympathy to his family and friends.

Meetings

The combined August meeting was in association with the PWI and IRSE with two presentations. **George Stamboulis from Delkor**, who sponsored the evening, gave a most interesting account of the development and supply of the "Cologne Egg" rubber damped track supports for the West Rail Project in Hong Kong.

Delkor won the contract to supply a range of newly designed units that were subject to a severe load test of 6 million operations. Well into the testing, cracks developed in one area of the rubber and an FEA showed that redesign was required. The eggs used previously in Sydney were benchmarked and a program of development and comprehensive testing was undertaken to meet the delivery targets. The new lighter units were developed with the first units being delivered in December 2000 followed by production of 6000 / month. The successful result would not have been achieved without the excellent cooperation and support from Leighton - RSA, the joint venture parties.

The second presentation by **Chris Miller from Alstom** provided insight into the very successful implementation of the **RIA** Blacktown Resignalling Alliance Contract. Blacktown, 35km from Sydney on the main Western Line, was to be a major Olympic interchange station and the signalling equipment between Doonside-Blacktown and the Richmond line branch was life expired and not capable of handling the increase in traffic. The on budget and early delivery of the project was achieved through the regular consultation with all stakeholders, achievable KPI's, open book accounting, cooperation and realistic commercial conditions without liquidated damages. Further work is being carried out to incorporate extensions and enhancements to the system.

Our June meeting with **Alex Wardrop from TMG International** covered the development work undertaken over many years and for the first time a fully computerised program to prepare the new Sydney City Rail train timetable.

The complexities to timetabling caused by the many junctions on the system and different types of trains were outlined. An interesting feature of the computer derived timetable and analysis of crewing requirements highlighted

a potential lack of train crew, particularly drivers. This resulted in the postponement of the timetable until more personnel became available.

The re-engining of the XPT Power Cars with new Paxman 12 cylinder VP185 engines was described by **Bill Mair of State Rail** at our July meeting. The original Valenta engines were installed in the British HST's and the XPT's in 1981 and experience showed that they were prone to failures due to thermal fracturing of the aluminum based equipment and required overhaul at 6000 hours.

The new engines installed in the HST's are achieving 24,000 hours between overhauls. Already the XPT's with engines installed by **UnitedGoninan** from May 2000 and completed 4 months ahead of schedule in December 2001, are achieving considerably reduced fuel and oil consumption.

A key feature of the new unit is the **Viking Traction** engine monitoring system, which automatically reports daily via modem to the XPT Maintenance Centre. The system can also be interrogated in real time to determine operating conditions of any unit at any time. Bill showed an example of a power car running from Sydney to Strathfield with the varying engine and train parameters being continuously monitored in service.

The reliability of the XPT power cars has dramatically increased following the installation of the new engines and the sophisticated monitoring system has allowed early detection of correction of faults.

Program

19 September

Preventing Flange Wear
Christian Peckham - Interfleet Technology

22 October

Alice Springs Darwin Project
Joint meeting with Civil and Structural Panel

10 - 13 November

Conference on Railway Engineering CORE2002 - Wollongong

21 November

Eminent Speaker - Mysore Nagaraja NYCT
Meetings at the IEAust Harricks Auditorium, 118 Alfred Street, Milsons Point, 5.30 for 6pm

Don't forget to register for CORE2002 in November!

John Watsford - Chair Sydney Division

Queensland

Meetings

There have been three technical meetings held since the previous Newsletter covering a range of topics. The Chapter's AGM was also held on 22 July 2002:

26 June 2002 – Cairns Tilt Train Project

Presenters: Jerry Jirasek, Senior Design Manager, EDI Rail and Cameron Smart, Technical Manager, CTT Project, QR

Attendance: 38

The presentation background the alliance management approach used for the project and the train's unique features and design innovations. The pro's and con's of alliance management were highlighted, and the general consensus that this approach has been successful to date. The unique features were well explained using the 3-D graphics generated for the train's design. A significant feature in the design was the extensive use of redundancy.

22 July 2002 – RTSA-Qld Chapter AGM

Attendance: 45 (Members and guests)

The committee for 2002/3 is:

George Nikandros (Chair), John Davey (Secretary), Mike Carter, Luis Ferriera, Barrie Griffiths, Paul Jenkins, Ken Kwong, Ian Macfarlane, Dudley Roach, Cameron Smart.

Dr Wardina Oghanna decided not to continue as a chapter committee member. Wardina was a member of the interim committee during the formation of the RTSA and a member of the committee since. Wardina was the driving force behind the successful 7th International Heavy Haul Conference held in Brisbane, June 2001. The committee thanks Wardina for his contribution to the success of the Chapter.

22 July 2002 – Petrie - Kippa Ring Public Transport Corridor Study

Presenter: Mr Casey Dwyer, Principle Manager (Transport Planning – SEQ), Queensland Transport

Attendance: 45

The presentation covered briefly the design and acquisition of a railway corridor in the early 1980's. It then covered in detail the recently completed Impact Assessment Study. In this study, the location of the earlier route and potential deviations were reviewed and the estimated patronage projections were updated. Other transport options for the corridor were considered, but the study confirmed that heavy rail integrated with the Brisbane suburban network provided the best option."

26 August 2002 – Level Crossings: How does Queensland Compare?

Presenter: Mr Ian Thompson, Network Access, QR

Attendance: 38

The presentation focussed on benchmarking Queensland's accident statistics with other Australian States, and overseas and the relative effects of control devices, from signage and active control perspectives. The presentation included innovations adopted in the USA and their success in reducing the fatalities – particularly the public awareness campaigns. One such campaign was to raise the awareness of traffic law enforcement agencies on the effects of road user behaviour from a train driver's perspective.

Future Events

For 2002, unless otherwise advised, the Queensland Chapter Technical Meetings will be held on the 4th Monday of the month, 6:00pm at the IEAust Queensland Division's Hawken Auditorium.

The technical meetings planned to December 2002 are:

16-Sep-2002 Rail CRC Seminar (half-day)

28-Oct-2002 Site Visit – Rollingstock Maintenance – Mayne

14-Nov-2002 International Speaker – Mysore Nagaraja, Chief Engineer New York Transit Authority

George Nikandros
Chairman, Queensland Chapter

South Australia

Railway Study Tour to Port Augusta and the Pichi Richi Railway

This joint RTSA/PWI study tour was held on Friday and Saturday 9 & 10 August and feedback from participants indicates that the tour was a great success both from the educational and social viewpoints. Twenty-three people participated in the tour, including 3 from interstate.

The tour observed a wide range of track infrastructure including two ARTC track wayside monitoring stations which record and analyse wheel and bearing condition, new culvert installations and trackwork including two new concrete bearer turnouts associated with the ARTC Port Augusta Continuity Project. The new underpass that allows the new 1067mm gauge Pichi Richi Railway extension from Stirling North to Port Augusta to pass under the NRG Leigh Creek coal line was also inspected.

The EDI rail workshops at Port Augusta were visited where progress on the rebuilding of 3 ARG owned accident

damaged Q class locomotives was observed along with other locomotive and wagon maintenance activities.

A range of heavy and light track maintenance machines were inspected at the Transfield Track Maintenance Depot. These included the SMD80 track laying machine, a hi-rail mounted mobile flashbutt rail welder, a rail weld grinding machine for rail rectification work and various other track and inspection vehicles.

A delightful journey on Pichi Richi Railway's 'Afghan Express' over the new extension and on to Quorn was also included in the tour. On the Friday evening a tour dinner was held and Stuart Glynn, Project Manager, Transfield Services gave a presentation on the difficulties of maintaining tracks in sparsely settled desert regions west of Port Augusta and of the works associated with the Continuity Project through Port Augusta.

- For those fortunate enough to participate in the tour, and who keep a record of their IEAust CPD hours for College membership and registration, this tour has been calculated to be worth 0.875 hours of Category B (Informal learning) and 6.5 hours of Category C (conferences and meetings). Just a little bonus for two very enjoyable days.

Forthcoming Meetings

3 October

Alice to Darwin Rail Construction Update
IEAust Building, Bagot St North Adelaide 1730hrs

19 November

AGM Dinner with Guest Speaker: Mysore Nagaraja, NY City Transit Authority
Classics Restaurant, Walkerville

The program for 2003 is currently being organised and will commence in February. Bill Edmonds has taken on the role of Meetings Coordinator and if you have a topic or know of an appropriate speaker, then please contact Bill by e-mail at billedmonds@picknowl.com.au



Online

<http://www.rtsa.com.au>

<http://www.core2002.on.net>

NOTICE OF AGM

Notice is hereby given that the Annual General Meeting of the Railway Technical Society of Australasia shall be held at 1.00 pm on **Tuesday 12th November 2002** in The Grand Ballroom at the Novotel Northbeach, 2 - 14 Cliff Road, Wollongong, New South Wales.

All RTSA members are invited to attend the AGM of the Society (which will be held during CORE2002 and is expected to be concluded by 1.45 pm). The meeting will present the annual reports of the various committees and office bearers, and elect a National Treasurer and National Secretary. The incoming National Chairman and Deputy National Chairman will also be announced at this meeting.

Election of National Treasurer and National Secretary.

Nominations for the positions of National Treasurer and National Secretary are invited and close at 5.00pm Friday 18th October 2002. Nominations should be forwarded to:

The RTSA Administrator
IEAust Engineering House
11 National Circuit
Barton ACT 2600

Nominations should be by signed at least one member of the Society, with the signed consent of the Society member being nominated. In the event of more than one nomination for a position being received, then an election will take place at the AGM.

Victoria Chapter Proposed New Zealand Rail Study Tour

Preliminary details of proposed study tour to New Zealand in February 2003.

The tour is currently based on Bed and Breakfast accommodation, with no en-suite facility (although this can be arranged if wanted), in Christchurch NZ.

In terms of places to be visited we currently have support from:

Tranzrail	Vehicle Design/Refurbishment, Infrastructure Maintenance, In-House Signal/Comms Design, Ferry Operation, Wellington Regional Trains.
Alstom	Hutt Workshops
Designline	Hybrid Gas Turbine Bus (same driveline as Green Goat loco in the USA)
Connexionz	Real Time Passenger Information Systems Supplier.
Tait Electronics	Train Radio
Christchurch City Council	Design and Installation of Tourist Tramway

Other activities proposed include visits to:

- Wellington Cable Car, including tour of cable car museum
- Tranz Coastal, number 2 rail journey in NZ - Picton to Christchurch
- Te Papa (not rail related but NZ's brand new national museum - worth a look)
- Ferrymead . Christchurch's transport museum - steam locos, railcars, electric locos etc)

Anticipated Costs for 5 days departing on the eve of 19 February 2003 are:

- \$1,800 p.p. twin share or \$2,000 p.p. single.

To Express Your Interest please contact:

**David Lewis, RTSA Victoria Chapter, C/O Halcrow, 542 Station Street BOX HILL
Vic 3128, Tel: 03 9899 9777, Fax: 03 9899 1214 Email lewisd@halcro.com.au**