

NEW SOUTH WALES NEWSLETTER



ENGINEERS
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RTSA

Railway Technical Society of Australasia
NSW Chapter
Mail: PO Box 6238, Kingston, ACT, 2604

JANUARY 2008

NEXT RTSA NEW SOUTH WALES CHAPTER MEETING

Wednesday 6th FEBRUARY 2008

11.30 for 12.00 at **CENTRAL STATION -
CONCOURSE MEETING ROOM** (next to Lost Property, opposite plat 2)



XPT REFURBISHMENT

Michael Cain, Project Manager, XPT Refurbishment, RailCorp

The now 20 year old XPT trains are going through a substantial refurbishment program to return them to a contemporary standard of comfort and ambience.

Carriages are getting a make-over with some not so obvious significant improvements to their equipment and fittings. At the same time the power units (locomotives??) are getting cab refurbishment work done on them as well as the lot being turned out in a rather attractive revised colour scheme. Work is rapidly heading to a conclusion later this year.

Michael will give us an insiders view on the work done, why, and what the future holds for the XPT trains in the next decade or so.

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FEBRUARY MEETING

The February meeting is announced on page 1 of this Newsletter, but there is a probable bonus. There are only a few XPT cars to be completed in the upgrade program, so it is almost a given that there now will be upgraded cars in all XPT sets. As fortune would have it, there is an XPT departure from Central at 11.35 (to Grafton) so arrangements have been made for an escorted inspection of suitable cars on this train (subject to operational requirements on the day).

As real (paying) passengers will be boarding, please do not board the train but wait at the concourse end of the departure platform for one of the project team members to meet you and escort you to the train. Of course those who actually use the XPT trains will already more than likely have had their own inspection under actual travelling conditions!!

WORDS FROM THE CHAIR (Andrew Honan)

2008 promises to be a great year for rail in NSW; particularly with the new opportunities created by government initiatives for long-term reductions in CO₂. Although market forces will inevitably lead to responses for more energy efficient motor vehicles and for different sources of energy, there is no doubt that public transport and in particular high capacity and efficient forms of mass transit will need to play a larger role in Sydney's transport system, as they should also do for freight. The opportunities for the new Commonwealth Government give the rail industry, and the wider community concerned with global warming, hope that more environmental friendly forms of transport will be pursued.

Along with road congestion and costs for road construction, existing levels of mass transit services should be seen as **only the floor** for future growth. In particular efforts to integrate transport modes, the efficiency of the modes and the demands for transport services will be key areas for attention.

In terms of the RTSA mandate for development of rail technical capability, the opportunities in 2008 will create demand for wider and higher levels of development of rail skills.

In this context the RTSA is holding a half-day symposium of Professional Development on the 12th February 2008 at the Masonic Centre (see flyer at the end of this Newsletter – print it out and bang it up on the office notice board!). This free half-day event will outline the various industry structured and unstructured programs for professional development. The RTSA, with support from Engineers Australia (EA), will highlight its Professional Development Assessment Program.

The RTSA Professional Development Assessment Programme assists professional rail engineers, not enrolled in a company sponsored EA chartered program, to move through and gain Chartered status.

Chartered status is becoming widely recognised across all disciplines of engineering. In particular Engineers Australia has announced a 'Limitation of Liability Scheme' for NSW practicing engineers and engineering companies as part of its Professional Standards Scheme (see page 41 Engineers Australia Jan 2008)

There are many other wonderful industry development programs, all designed to meet specific industry needs. Those interested in hearing of the different industry schemes and how they function are encouraged to attend this free event (please rsvp Jackie Allen at jallan@engineersaustralia.org.au)

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Following the NSW Government announcement in November 2007 of a Sydney "Metro", the RTSA also intends to pursue Metro rail - what is it, what does it do for its city and what technology is involved. We expect to have more to say on a proposed one day seminar, planned for May of 2008, in the next month or so. This event will be particularly attractive to RTSA members.

We also intend to closely follow-on the hard work in 2007 in regard to survival of regional rail. The Feb 2007 framework symposium was the basis for a new paradigm for regional rail. Clearly with the Asciano announcement to sell down its involvement in regional rail, there will be a vacuum in this market. The RTSA's effort, along with others, to raise the awareness of the plight of regional rail has brought recognition of possible new structural arrangements that could result in continuation of these services.

I urge all members to participate in the talks and events this coming year; they are the basis for continuous development and go towards recognition of CPD points for membership status in EA.

I would also like to encourage all non-members to seriously consider joining RTSA. The outlay is very modest and the rewards substantial. Membership forms are at <http://www.rtsa.com.au/membership/>

Finally, I would very much encourage everyone to reserve the dates 7 -10 September 2008 for CORE in Perth. This event is the premier rail technology event held by the RTSA every two years.

REPORT FROM NOVEMBER MEETINGS:

Reporter - Malcolm Cluett

7 November 2007. Morgan Noon – Logistics Manager, Sydney Ports Corporation

The presentation concerned the **LAND-SIDE LOGISTICS STRATEGY FOR PORT BOTANY**

Port Botany is a strategic and economic powerhouse for Sydney. Container shipping ceased on Sydney Harbour a few weeks ago. The NSW government has major expansion plans for Port Botany, in the area between Foreshore Drive and the 3rd Runway of Kingsford Smith Airport.

The Cooks River intermodal freight terminal (near Sydenham) has been purchased by Sydney Ports. They have also purchased 60Ha adjacent to the remodelled Enfield Marshalling Yard. Cooks River Yard is currently not signalled, causing problems and delays with train operation.

The railway to Port Botany currently ends in three dead-end sidings. (Patrick, DP World, Empty Containers sidings). Some of these sidings are short, and trains have to be broken up and amalgamated at the Botany railway yard. This is not an efficient operation. Because of site constraints, it is not possible to provide a balloon loop.

Recent growth for Sydney Ports has been at 12% per annum. New rail-mounted gantry cranes (planned to be commissioned in Feb) will be capable of 50 lifts per hour (to load and unload trains and trucks). Currently equipment can handle thirty container lifts per hour. Rail volumes have increased from 110,000 to 300,000 container movements per annum since 1977.

NSW Government Initiative is to expand Port Botany. When this capacity is fully utilised, Newcastle will then be expanded. Motor Vehicles and General Cargo will be handled at Port Kembla.

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Sydney will see increased intermodal rail development, in response to road congestion.

A body to oversee logistics at Port Botany might be set up. It would be a bit like the Hunter Valley Coal Chain.

The drought has reduced the traffic in containers containing produce (which originate a long way from the port). Most containers come less 40km to get to the port. The curfews on rail freight during peak hours is a dis-incentive for shippers to use rail transport. Fortunately there is a dedicated railway from Enfield to Port Botany that doesn't conflict with the commuter services.

There are various intermodal terminals around Sydney – currently around six. Only Enfield has the potential for growth. It is proposed to build a large amount of warehousing in the Enfield Intermodal area. A new intermodal terminal will be built at Moorebank on Commonwealth Land. Another new one will be built somewhere in the vicinity of the M7 corridor.

The peak container movement between the Enfield Intermodal terminal and Port Botany is expected to be 300,000 containers per annum. This equates to 8 – 10 train movements per day, each 600m long. Two train sets would be required, each making 4 – 5 round trips per day. The train operations have been simulated to meet demand up to 2020. The speaker displayed an animated diagram of this, which was demonstrated to politicians and decision-makers who will be required to approve the project!

Rail's target is to have 40% of the containers entering/leaving the port by 2020. Some upgrades would be needed for the current railway (3km is still single track). There will need to be junction and signalling upgrades too. DP world's siding needs extension so that it is 600m long. (Patrick's siding is already 600m long.). The level crossing near the airport (General Holmes Drive) will need grade separation. This is a busy road and used by the popular 400 bus route. Bridge works are needed in the vicinity of Banksia Street, Botany. Such construction work is likely to cause noise and disruption to the local residents. The Metropolitan Freight Lines (including the Enfield – Botany railway) will soon be taken over by ARTC from Railcorp.

Enfield's main access for trucks will be from Roberts Road on the Western side. A road overbridge over the middle of current Enfield Yards will be required to get trucks to the Eastern side where the intermodal terminal and warehousing is planned. (Existing roads on the Eastern side of the yard are more residential in character.) Enfield Yard straddles three Local Government areas, and each are looking after their residents by trying to direct the future truck movements elsewhere (NIMBY!!). After some delays, approval has been obtained for this intermodal redevelopment. This will be either a PPP development or will be done by Sydney Ports.

It is interesting that half of all of the container movements going to Port Botany are empty containers for export (re-positioning). The Enfield – Port Botany shuttle trains will reduce truck movements for the final 18km between Enfield and the port. If it were not for the new redevelopment, road congestion in the Eastern suburbs would rise to intolerable levels. At present a typical delay (due to congestion) for a truck movement is one hour. If this increases to two hours, the economics for truck haulage of containers becomes doubtful.

Question from the floor –

Use of Clyde Yard as a site for a new intermodal terminal. – This area is subject to freight train curfews on the Railcorp-controlled lines, and also road traffic congestion.

Future of Port Kembla – containers largely have origin/destination in the Sydney area. Also the lack of commitment for the Maldon - Dombarton line.

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Security. Issues with examination (unloading) of containers, X-raying, and the possible use of a bonded area in the new Enfield intermodal precinct. All of this is under consideration. At present it normally takes three days to turn around each container. Customs and Quarantine rely heavily on intelligence, rather than random inspections of any container.

8th NOVEMBER 2007: Jerry Jirasek, Downer EDI

The speaker gave a very entertaining presentation about the history of **HIGH-VOLTAGE AC RAILWAY ELECTRIFICATION** in this country. Outside of Europe and the US, ac electrification was fairly rare until the 1960s. On-board rectification from AC to DC in some early systems used mercury-arc units, which are best suited to stationary applications. Others used all-AC systems. High Voltage electrification needs larger clearances around the conductors. Despite this, high voltage electrification was retro-fitted onto existing railway lines in Queensland and WA (as well as overseas) with numerous tunnels, overbridges and footbridges.

2700km of QR route is now electrified to 25 kV. This is a very impressive total compared with the extent of electrification of railways around Sydney and Melbourne, and demonstrates the economies possible with a modern system. Electric traction accounts for 98% of the passengers on the QR system, and 65% of the freight task. There is now 172km of route electrified in WA. This will increase by 70km when the Mandurah line opens. (This happened on 23rd December 2007)

Electrification of railways results in significant costs. The QR mainline electrification project had a capital cost of \$1050M. The cost of immunisation of other electrical conductors (such as signal cables) is also significant. The Perth - Mandurah railway project, electrified from the start, will cost \$1.4b. This will introduce the West to underground railway stations in the Perth CBD.

An air gap of 250mm is required around any item energised to 25kV, and also a 750mm surface path. Such provision is complicated on the Tilt Train, where the pantograph must move sideways on linear bearings to account for the tilting movement. High Voltage electrical hardware for railway traction purposes is now available as integrated devices, which saves some space. Narrow gauge vehicles have less space for hardware. On the Queensland Railway system, there is a restriction on the underframe width (in conjunction with the high-level platforms).

Perth has four electrical substations, and Brisbane has five substations, on the suburban railway system. This compares with the numerous railway substations in the Sydney and Melbourne metropolitan areas which need to cater for higher traction currents owing to the 1.5kV DC legacy system. .

The QR mainline network has just seventeen substations. These are 50kV substations, with the voltage taken from a tapping at the centre of the windings, resulting in the 25kV for traction. The use of Auto-Transformers and Centre-Tap 50kV transformers allows 100km between substations. Substations convert the voltage from the Supply Authority's 132kV three-phase to 25kV single-phase.

The electrical load can vary from zero to 40 MW and back to zero again, with large coal trains (having multiple locomotives) on the system. In remote areas, the supply network may need strengthening to cope with this single-phase draw on the network. In addition, a thyristor can draw a non-sinusoidal current. Harmonics and

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Phase Imbalance are undesirable things that need to be managed by electrical designers. Harmonics Filters are installed, and also Static Var Compensators for phase imbalance.

On thyristor locos, large power factor correction devices are used (consisting of capacitor banks and reactors). The use of booster transformers (deployed every few km) discourages stray currents which can damage underground infrastructure such as water pipes. IGBT vehicles can have hardware installed to minimise harmonic effects. System Operators can recognise when a train's inverter (for example) is not working correctly (from their control room screen) – so sensitive is the diagnostic equipment.

Thyristor Locos in QR have Dynamic Brakes (no regenerative brakes). Regenerative current can have a nuisance value to the supply authority, and QR will receive no income for it. Now with 3-phase traction motor locos, regeneration is possible. Network receptivity is good. A backup dynamic brake is provided when the power supply network is weak.

Disciplined operational strategies can overcome network problems (ie, simultaneous uphill and downhill trains, allow electricity to be shared without passing back to the supply authority).

On a new network, station spacings can also be strategically positioned so that electricity tariffs can be minimised, (ie, simultaneous departures and arrivals) but this would intrude greatly on timetable planning.

When an AC loco negotiates neutral sections, there is a 'soft start' for the various on-board systems. On the latest SMU220 units, the train automatically goes into a light regeneration mode while negotiating neutral sections so that the auxiliary systems are kept operating. On the electric Tilt Train, the distance between pantographs allows it to span the neutral sections. Incidentally it holds the Australian rail speed record of 210 km/h.

A three-phase power system is provided for auxiliaries. There is redundancy for the propulsion system and auxiliaries, but not for the HV equipment. The electrical hardware is reliable. Over 10,000 IGBT modules have been supplied.

There are 596 vehicles in use in Brisbane. New EMU trains for Brisbane and Perth are standardised for 130 km/h operation. Perth EMU vehicles are very similar to Queensland ones, and are generally inter-operable.

QR has a more restrictive loading gauge in the underframe areas, and the Perth units are also built to suit this for standardisation's sake. The speaker supplied pictures of WA units operating under test in Queensland. Perth and Brisbane EMU trains have their body based on the AUPT prototype. (Australian Urban Public Transport vehicle). This was a Federal Government Initiative in the early 1970s. The prototype (non-operational) AUPT bodyshell stood in Canberra railway yard for many years, until destroyed by fire.

The underframe of the QR EMUs is made from low-carbon stainless steel, and the cars are still in good condition after 28 years in service.

Perth has:

- 48 x 2car units. (Six out of eight axles are motored)
- 31 x 3car Bombardier IGBT AC traction motors.
- 15 x 3 car AC traction motors. (additional sets for traffic growth)

In 1982, Perth's metropolitan rail system was down to just 42 route km. (with the trains on the Perth-Fremantle line replaced by buses). The Fremantle Line was reopened initially with DMU railcars. Now Perth

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has a 172km, with a further 70km to be added when the Mandurah line opens. 54km of the lines in Perth are in the highway median areas. This approach has long been used in the US (ie, Chicago) and also could be used to straighten the Newcastle – Brisbane rail corridor in association with highway improvements. More than 50% of the rail passengers in Perth are transferring from buses (showing the importance of intermodal interchanges, ticketing and promotion – something that is definitely lacking in Sydney). Brisbane and Perth both went down the path of first electrifying the existing lines, and then building new lines. Perth took up the use of One Person Operation and Automatic Train Protection from the start. Video Monitors on the platforms assist the driver. A new EMU depot has been built at Nowergup, to complement the existing depot at Claisebrook.

Electric Locomotives

On the QR Mainline, the initial strategy was to replace 5 diesel locos with 4 electric locos. Maintenance of locos is reduced by 50% compared with diesels (though this is offset by maintenance on the overhead system). There are electrical losses from energised overhead wires, even when there are no trains.

Eighty locos were supplied by Clyde (now EDI) of the 3500/3600/3900 series with DC traction motors.

Originally 50 were geared for coal train haulage and 30 for mainline freight/pass haulage. Until the 1990s they were used on Brisbane – Rockhampton general freight as well as peak hour head end trains in the Brisbane suburban area. These were followed by 22 of the 3300/3400 series Hitachi Thyristor units. All have triple bogie configuration. Different manufactures have different methods of dealing with this. (ie, side play, or relying on flexi-coil springing). Tri-Bo configuration results in 30% bending moment reduction on the bridges. (At the time of initial electrification, there were many original timber bridges. QR has been implementing a major line straightening and bridge strengthening programme, but there are still some sharp curves on the electrified system.) Other advantages of the tri-bo layout are less track forces, shorter wheelbase, less wheel wear and improved traction.

Creep control is now being added in conjunction with a radar speedometer device. This feature was introduced on EMD diesel electric locomotives in the 1980s. Bodies are of monococque (load-bearing) construction. A conventional underframe would use up valuable space. There is limited space within the bodies to mount the electrical equipment. AC traction motors are much more compact and durable than the older DC traction motors. The space between the inside wheel faces is only 992mm. The AC traction motor rotor is uninsulated. It has no commutator (no flashover) and no brushes. The lighter mass is easier on the track.

The following figures demonstrate the advances in traction technology:

- 1986 DEL 96t @ 21% adhesion
- 1996 EL 110t @ 26% adhesion
- 2007 AC DEL now 120t @ 37% adhesion

Most EL are now deployed on the Hay Point /Dalrymple Bay system. There are now less than 30 on the Gladstone/Blackwater system.

No ELs are now deployed on the Gladstone – Brisbane corridor. They are being re-gearred for coal haulage, and receiving a general overhaul. The only electric trains on this corridor north of Gympie are now the electric tilt trains.

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Rebuilt ELs are being fitted with equipment for future electronic controlled train (ECP) braking. They are also being rebuilt for future 37% adhesion. (3100/3200 class conversion to 3700 class).

Further diesel locos (49 units) of the 4000 class are being delivered.

Lineside Hardware

QR electrification masts are either lattice steel or solid steel. Perth has adopted aesthetically-pleasing concrete masts of circular section. The structures are noticeably lighter and more attractive than the heavy structures on the 1.5kV DC system in NSW and Victoria.

Growth Projections for Coal

Tonnage growth for coal on the QR network is impressive:

- 1986 75 mtpa
- 1996 100 mtpa
- 2006 165 mtpa

The reliability of the Queensland coal supply chain, and its capacity, is a political issue, with much debate as to whether QR is doing enough to deliver the required amount of coal, and whether further investment is required. .

The speaker predicted a steady increase in passenger traffic in Brisbane and Perth, and a steady increase in QR coal haulage tonnages.

Questions from the Floor

Conversion of older low-voltage lines to 25kV. This would be very difficult and costly, in the Newcastle – Sydney – Wollongong and Sydney – Lithgow corridors, as well as the Sydney and Melbourne metropolitan areas.

There is no Australian haulage of freight trains by electric traction outside of Queensland. There is an isolated section of high-voltage railway in the central part of the North Island of NZ. This has been done, despite the need for two loco changes between Auckland and Wellington for passenger and freight trains.

Double stack container trains, - offer a saving in energy per unit of payload because of shorter train formation and better load to gross ratio, but would increase the cost of electrification because of the need to raise the height of the contact wire.

Proposed new railways

The Toowoomba Range line is an interesting case, and will involve long tunnels which are amenable to electric traction. Would a private operator contemplate such capital investment ?? QR was a vertically integrated railway and the QR government put up the funds for the initial electrification. The Commonwealth Games (in 1982) and the World Expo (in 1988) are hard to imagine without the Brisbane EMUs.

Double deck AC trains. These trains exist in Europe. Normally these operate with a loco and double-deck trailers in push-pull mode, rather than being self-propelled. Others have space reserved for the electrical hardware (transformers, etc) reducing the passenger-carrying space. The configuration of these trains is different to those in Sydney, because of the low-level platforms and doorways leading directly to the lower deck.

NEW SOUTH WALES NEWSLETTER



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Compatibility of loaders/unloaders with electric overhead wires. Overhead wires at the loaders are moveable, and controlled automatically. The locos drop their pantographs in response to track-mounted magnets. They are pushed through the section by the mid-train locos.

THE OBSERVATION POST

January is not the best time to be writing an editorial – all that cheer and goodwill, outdoor days and a happy social whirl tend to set passionate scribbling back a step or two. So I thought I would provide a description of two longer distance rail journeys I have undertaken this month and leave you to draw your own conclusions.

The first was a quick trip from Melbourne (or Southern Cross as its major station is now known) to Ballarat to observe the practical impact of the recent upgrading program (the RFR upgrade). The 10:05 down this day was a single Vlocity (DMU) set, which curiously was identified by set number on the train departure board. These cars are set up for middle distance service (70 – 200 km sort of thing) and seem to have plenty of power to cope with the long grades encountered on some RFR routes of which Ballarat is one. Running was to time and the 119 km with several stops and two single line crosses was completed in the scheduled 1h 27m (82 km/h average). The only disruptive note was the overly zealous signalling and TPS that wanted this high performance train to behave like a poorly braked freight train when approaching any restrictive signal – which it did for the crosses and to take the platform loop at one intermediate station. The time penalty imposed by these less than charming features was around 10 minutes. At every stop there were both boarders and leavers indicating a reasonable level of regional travel on this line.

Return on the same train set was all stations (three more stops than on the down), but via the new 'short' track at Bungaree, which was run in 1h 19m (86 km/h average). Two significant deviations (at Parwan and Bungaree, and several curve realignments (Melton, Bacchus Marsh, Ballan, Gordon, Warrenhiop) have provided a route that is at least in keeping with the high performance DMU's that now provide the majority of services on this line. It should be noted that a peak hour express runs a 1 h 4m schedule in both directions, averaging 109 km/h despite the 500 m summit that is encountered on this line. A 40% jump in regional passenger travel immediately following completion of the RFR program is indicative of the value of this integrated project.

The second outing was by XPT to Harden and return. In this case the specific reason for travelling was to observe the effects of diversion via Wollongong – something that was a daily event for three weeks from the beginning of January (the dreaded track work between Glenfield and Campbelltown was the reason for this diversion).

There is a bit of essential background to this one. In summer, starting a year ago, a summer timetable is applied to the XPT on the Southern line to account for those days that have heat related speed restrictions (WOLO conditions). The down daytime XPT moves from a 07.45 departure to 06.58, but still arrives Melbourne 10 minutes later than normal. The northbound daylight run continues to depart Melbourne at 08.30 but in summer arrives Sydney at 21.00 instead of 19.55. Overlay a diversion via Wollongong on the summer times and the RailCorp / ARTC altered timetable had the southbound daytime XPT south of Moss Vale around 1h 50m minutes later than the normal summer timetable. Northbound the diversion added 1h 56m to the schedule into Sydney. In a somewhat defeatist move the XPTs were terminated at Albury for the duration and buses run over the 300 km Victorian section. The sad part is that the buses were able to maintain the XPT timings. Apparently CountryLink, in some curious sort of denial, still advised the normal summer times south of Moss Vale, so some punters must have been mightily confused.

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Back a year or two ago (in Jan 1964 to be precise) a rather younger writer travelled to Wollongong on the 12:10 all stations ('all stations' then meaning everywhere south of Sutherland). Venerable steam loco 3223 (dating from the 1890's) had a load of 242 tonnes – much the same as the six passenger cars on the latter day XPT. This train did the journey in 2h 15m, while the rather faster steam South Coast Daylight which ran express south of Sutherland was timed at around 1h 30m. Now of course we have the XPT which for this diversion was tabled by RailCorp for a 1h 55m non stop run to Wollongong southbound and 1h 56m northbound. As any even vaguely aware person would gather, a train with 4 times the installed power of the 1964 train, and no intermediate stops, should be able to save a significant amount of time, but RailCorp in their wisdom went for the safe move and put the XPT in both directions behind stopping trains (even though the schedules for those stopping trains were heavily sedated in the last timetable change). So in nearly 45 years it would seem that all the vast sums spent on the South Coast line have actually produced little in the way of faster transit times, although they have given us electric trains at higher frequencies and with air conditioning. Unlike Victoria, there have been no improvements to the alignment, and in fact there have been a number of retrograde steps which have slowed trains down.

XPT motors XP 2003 and 2018 bracketed six refurbished cars on the down. Departure was one minute late at 07:05 (the changed depart time was something else the punters knew nothing of) and by Wollongong we had dropped a further 3 minutes (even the stopper ahead couldn't keep up with its Valium addled schedule) – a stunning average of 42 km/h non stop. Moss Vale was almost two hours late on the 'summer' timetable (and still at 42 km/h average from Sydney) where we collected a couple of busloads of passengers, who had been bussed from Campbelltown and Strathfield only to suffer an extended wait for their hitherto missing train. Beyond Moss Vale running was reasonable but hardly competitive, and I am pleased to advise by Harden the average speed from Sydney had risen to a breathtaking 59 km/h. 3809 on the Melbourne Express in October 1960 achieved exactly the same result, but with a considerably heavier load.

The return train arrived Harden early (it was after all on a WOLO schedule on a non WOLO day), and had a similar experience at Yass Jn, Goulburn and Moss Vale – waiting for the timetable to catch up from behind. The run from there to Wollongong was steady (this line has severe speed limits on the long descent to the coastal plain from Robertson to Unanderra) but due to some quite negligent ARTC timetabling we were 48 minutes early there despite taking a few minutes longer than on the down journey. From there the smell of home must have pervaded the train (and controllers) and we gained 12 more minutes to Waterfall – you guessed it, just in time to be held to follow the local all stations from there. Bi-di signalling and a plethora of by pass loops at Waterfall are totally wasted on this railway – hold the express (even if it is only a three week wonder) for a stopping train with bugger all passengers and a schedule that at that time of night could be reduced cutting the Valium supply to shorten the journey by 10 minutes on its way to Central. Someone must have had a brain explosion at Hurstville, since they diverted us to overtake the stopper such that we arrived 70 minutes early on the 'diverted' schedule, or 45 minutes late on the 'summer' schedule or 1h 50m late on the 'normal' schedule (it was after all a non WOLO day).

As I said at the beginning I will leave you to work this one out on your own, but I can't help feeling that the thing that we are told is one of the most complex systems in the world (an obvious bit of creativity to anyone who has been outside the country) is in reality a system with unduly simple management. It would not be beyond the scope of an old fashioned clerk with a quill and eyeshade to have scheduled this diversion with a modicum of sanity. Why then, with all the computerised widgets and remote controlled what-nots, can't even a half decent result be achieved these days? Draw your own conclusions.

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MEETINGS

The list of coming meetings is now in tabular form toward the back of this Newsletter. This allows for more information and is more easily updated as events unfold. Basil Hancock has taken charge of this aspect of our services. Anyone with inspirations or bright ideas for future meetings should contact Basil at Basil.Hancock@railcorp.nsw.gov.au. Railways are an integrated mix of technology, operations and business, so potential topics from any or all of these disciplines would be most welcome.

Meetings are on the 1st Wednesday of the month at 12.00 in the large meeting room off the main concourse of Sydney Central (Steam) Station. Note that the Indian Pacific is in town for the duration of the meeting so far western members have an interesting opportunity should they so desire. The new time and place for our meetings is designed to be more accessible to members and friends. The venue can be found in the North West corner of the main concourse opposite platform 2, next to the Lost Property Office.

When joint meetings and special events are at different locations, or for those odd months when meetings are not being held, suitable advice will be given in advance.

Those who are Engineers Aust members, and who attend RTSA meetings and events, will qualify for CPD credits as per the Engineers Australia criteria. Members are responsible for recording their own CPD for audit.

RTSA SYMPOSIUM ON PROFESSIONAL DEVELOPMENT:

The NSW Chapter of RTSA will be holding a free symposium on professional development at the Sydney Masonic Centre on Tuesday 12 February 2008. The purpose of this symposium is to present various rail industry professional development programs, and for Engineers Australia to promote the Chartered Professional Engineer and Chartered Technologist accreditations.

The RTSA will also be presenting the Professional Development Assessment Program which it undertakes on behalf of Engineers Australia for the assessment of the Chartered accreditation.

Further details, including how to attend, are in the flyer toward the end of this newsletter. Put the flyer on your office notice board!

CORE 2008: PERTH - 7TH TO 10TH SEPTEMBER 2008.

Themes will be around high volume bulk freight and the integration of rail as part of the export supply chain, and rail in an urban environment and the issues of integrated planning of land use and transport as the core of successful public transport. Register your interest by going to www.core2008.org.

Calls for abstracts of potential papers for CORE 2008 have now closed and no doubt a quite considerable number of latent authors are waiting with bated breath to find out if they will be writing a paper for the conference. Registrations for the conference will open late February; once again refer to the web site

NEW SOUTH WALES NEWSLETTER



ENGINEERS
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Railway Technical Society of Australasia
NSW Chapter
Mail: PO Box 6238, Kingston, ACT, 2604

JANUARY 2008

One of the most significant urban rail developments for many decades opened for business two days before Xmas – the Mandurah line. When you realise Mandurah is as far from Perth as Woy Woy, Bulli or Blaxland are from Sydney, that it has a train every 10 minutes and the journey time is only 48 minutes you begin to appreciate the significance of this development. The Mandurah line, not unexpectedly, will be the focus of a conference technical tour, as will some of the Pilbara iron ore railways (the latter being a very long distance technical tour).

For anyone with an interest in the rail industry CORE 2008 promises to be the premier event for this year. Despite the distances it is an event that should not be missed.

FUTURE MEETINGS PROGRAM: Meetings in black are confirmed; in red are tentative.

DATE	SPEAKER	TOPIC	LOCATION	TIME
Wednesday 6 February 2008	Michael Cain, RailCorp	XPT Refurbishment	Central Station Concourse Meeting Room	11.30 for 12.00
Wednesday 5 March 2008	John Youds, Interfleet	Train Horns	Central Station Concourse Meeting Room	11.30 for 12.00
Wednesday 2 April 2008	TBC	TBC	Central Station Concourse Meeting Room	11.30 for 12.00
Wednesday 7 May 2008	Tim Parker, TIDC	Metropolitan Rail Expansion Program	Central Station Concourse Meeting Room	11.30 for 12.00
Wednesday 4 June 2008	TBC	TBC	Central Station Concourse Meeting Room	11.30 for 12.00

There are a couple of 'TBC's' in there which means that Basil (our meeting program coordinator) is waiting for confirmation from prospective presenters.

Meetings will continue to be held on the first Wednesday of each month through to December, with the possibility that September may be a non starter due to the close time proximity to CORE2008 in Perth. Topics being considered include Freightlink (update on the Alice Springs to Darwin Railway), RailCorp Automatic Train Protection trials, Life Extension of older motive power, CityRail Traction Supply Upgrade and PPP train update.

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OLD RAILWAY MEN:

Four old retired guys are walking down Argyle St in Goulburn. They turned a corner and see a sign that says, "Old Timers Bar - all drinks 10 cents." They look at each other; then go in, thinking this is too good to be true. The old bartender says in a voice that carries across the room, "Come on in and let me pour one for you! What'll it be, Gentlemen?" There seemed to be a fully-stocked bar, so each of the men ask for a beer – a real one. In short order, the bartender serves up four cold beers and says, "That'll be 10 cents each, please."

The four men stare at the bartender for a moment; then look at each other... They can't believe their good luck. They pay the 40 cents, finish their drinks, and order another round. Again, four more beers are produced with the bartender again saying "That's 40 cents, please" They pay the 40 cents, but their curiosity is more than they can stand. They have each had two beers, and so far they've spent less than a dollar in total. Finally one of the men says, "How can you afford to serve beers for ten cents apiece?" "I'm a retired tailor from Petersham," the bartender said, "and I always wanted to own a bar. Last year I hit the Lottery for \$25 million and decided to open this place. Every drink costs a ten cents - wine, liquor, beer, it's all the same." "Wow! That's quite a story," says one of the men.

The four of them slurped at their beers and couldn't help but notice three other guys at the end of the bar who didn't have drinks in front of them, and hadn't ordered anything the whole time they were there. One man gestures at the three at the end of the bar without drinks and asks the bartender, "What's with them?"

The bartender says, "Oh, they're **retired railway men**. They're waiting for happy hour when drinks are half price."

APPLIED WISDOM:

I dialled a number and got the following recording: *"I am not available right now, but thank you for caring enough to call. I am making some changes in my life. Please leave a message after the beep. If I do not return your call, you are one of the changes."*

Aspire to inspire before you expire.

My wife and I had words, but I didn't get to use mine.

Frustration is trying to find your glasses without your glasses.

Blessed are those who can give without remembering And take without forgetting.

The irony of life is that, by the time you're old enough to know your way around, you're not going anywhere.

I was always taught to respect my elders, but it keeps getting harder to find one.

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Railway Technical Society of Australasia

Professionals in the
Rail Industry -
Mark Your Diary

Tuesday
12 February 2008

1:00pm—5:00pm

Ionic Room
Sydney Masonic
Centre
66 Goulburn St
Sydney

Free
Event

Railway Technical
Society of
Australasia

Shaping the
Australasian
Railway Industry
for the Future

For Symposium
Registration
Contact

Jackie Allan
JAllan@engineers
australia.org.au

02 6270 6569

RSVP by
5 February 2008

Half day Symposium on Professional Development

To identify the characteristics of training and
development programs offered within the rail industry

To identify opportunities for new initiatives

To identify mechanisms for knowledge transfer and
development of railway professionals

To discuss the RTSA Professional Development
Assessment Program for the rail industry

Play a part in shaping the future railway industry

Places are limited - Register now

Afternoon tea will be available



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RSVP by
5 February 2008

Preliminary Program Symposium on Professional Development

1.00 Registration

1.15 Welcome

- Andrew Honan (NSW Chapter Chairman, RTSA)

1.20 Industry Presentations

2.30 Afternoon Tea and Snacks

2.50 Industry Presentations

4.00 Short Break

4.10 Engineering Australia Professional Development
Assessment Program for Rail Industry (Steve Dilli)

4.30 Open Discussion

4.55 Closing Remarks



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KEY RTSA SYDNEY CHAPTER COMMITTEE CONTACTS

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Andrew Mackay	Committee	Malcolm Cluett	Committee
Bob McCotter	Committee	Eddie Hawes	Committee
John Watsford	Committee	Tomas Magyla	Committee

CONTRIBUTIONS TO THE SYDNEY NEWSLETTER

Part of the function of RTSA is to keep members in touch with what is going on in the industry and with each other and to that end we are only too happy to publish items of interest. Articles or editorial comment for Newsletter are very welcome. We have several hundred members locally some of whom have stories, events or developments of interest that could make an interesting item for Sydney Newsletter.

Contact details are –

The Editor, Max Michell, e-mail to samrom@bigpond.com, phone 02 9331 5662 or post to P.O.Box 279, Potts Point, NSW, 1335.

For all other matters relating to RTSA Sydney Chapter contact Bill Laidlaw (Secretary) or Andrew Honan (Chairman) as above.

CPD CREDITS

Engineers Aust members who attend RTSA meetings and events will qualify for CPD credits as per the Engineers Australia criteria. Members are responsible for recording their own CPD for audit.

NOTICE TO MEMBERS RECEIVING RTSA NEWSLETTER BY EMAIL

If you should receive this Newsletter by post but would prefer to get it by e-mail (quicker and more reliable) then please let the Canberra know (address in the page header). E-mail saves time for you and costs for RTSA, which in the end can only mean better service to our members

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