

NEWSLETTER No 2/2006

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NEXT MEETING

NO MEETING IN MARCH

Due to a lack of a suitable topic there will be no meeting in March.

The next meeting will be held on 6th April and will be a site visit to Intercast and Forge at Wingfield to observe the latest in high speed mass casting technology.

More information about the next meeting will be provided in the March Newsletter.

Continuous Professional Development (CPD)

IEAust members are reminded that attendance at RTSA technical meetings contribute towards CPD requirements. Each RTSA technical meeting generally has a value of 1 CPD point.

LAST MEETING

Improving Railway Safety through Accident Investigation

Tony Simes

Senior Transport Safety Investigator
Australian Transport Safety Bureau

Tony Simes spoke about the importance of accident investigation in identifying opportunities for improvement to railway safety.

The presentation briefly described the role of the ATSB and the ATSB's approach to accident investigation. The presentation discussed a number of significant rail accidents including a freight train derailment in the Adelaide Hills at Glenalta on 21 November 2004.

A full report will be issued in the March Newsletter.

The meeting was attended by 36 members and visitors with the Vote of Thanks being given by George Erdos.

SPECIAL GENERAL MEETING

A special general meeting was held on Thursday 2nd February 2006 in conjunction with the general meeting to discuss a proposed alteration of the RTSA SA Chapter Constitution.

As explained by George Erdos, the reasons for the change in the Constitution were:

- i) To better reflect the current operation of the RTSA;
- ii) To simplify some of the requirements and clarify roles of the Executive and Council;
- iii) To make the document more logical and easier to find requirements for various elements of the organisation;
- iv) To remove reference to the possibility of becoming incorporated separately from Engineers Australia;

Following George's explanation and the opportunity to ask questions, the motion that the proposed changes be accepted was put to the vote.

The results of the vote was as follows:

For – 26
Against – Nil
Abstain – 1

As a result of the vote, the motion was carried.

CORE 2006

Core 2006 will be held between 30th April 2006 and 3rd May 2006 at the Grand Hyatt Melbourne.

A total of 62 high quality technical papers will be presented over two days. The papers will focus on a range of railway related issues including Projects and Planning, Systems and Management, Safety and Risk Management, Track and Rail Maintenance, Vehicle and Wheel Maintenance, Vehicle-Track Interaction, Signalling, Rolling Stock, Locomotives and Condition Monitoring. A range of site tours will be held on the third day.

All Core conferences are noted for their excellence and value and this conference is expected to be one of the best.

Registrations are now being accepted. To register or for additional information about the conference, go to:

www.core2006.org

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NEWS FLASH – ARG WA Operations Sold

In a press released to the Australian Stock Exchange, joint owners of ARG, Westfarmers and Genesee and Wyoming Inc, announced that they have reached an agreement to sell their WA Operations.

Babcock and Brown Limited have agreed to purchase the below rail proportion of the business while the above portion will be purchased by QR. The total value of the sale is stated as \$956M with another \$18M in estimated adjustments.

The sale is subject to a number of regulatory approvals, and it is expected that the sale will be concluded by the end of March 2006.

Genesee and Wyoming Inc will buy out Westfarmers 50% stake in ARG's operations in South Australia, and rename the business "Genesee and Wyoming Australia Pty Ltd". The SA business will continue to own both above and below operations in SA, provide the services for the Adelaide to Darwin line and expand their interstate haulage operations.

POINT OF VIEW – Max Michell

There are times when nothing much seems to happen and you wonder if the rail industry has gone to sleep. Then there is the middle week of February 2006 when it all happened at once. That week was quite something with a series of quite momentous announcements and pronouncements that could have far reaching effects on the rail industry. In fact one of the happier players (for the whole week was much polarised) was quoted as saying the week was 'momentous'.

Although there were rumours for some time it was still something of a surprise when QR (the narrow gauge railway once known as the Quaint and Rattly) and Babcock and Brown investment dealers announced the acquisition of most of the ARG property. QR got the above rail part of the Western business (in effect the trains plus contracts of the former Westrail) plus contracts in NSW and Victoria along with, it is understood, some of the eastern assets that were not part of the original deal when AN was sold off. B and B got the below rail part - Westnet (i.e. former Westrail track and train control).

The residual track in South Australia which had been sold when AN were broken up had never been separated from the above rail part of the business – it remained vertically integrated, albeit on a disjointed low volume piece of property. This rump, the original ASR, has been recreated, with the buyout by American regional Genesee and Wyoming of the half share owned by partner Westfarmers. The ASR piece of

property includes standard gauge branch lines to Pinnaroo, Loxton and Apamurra, broad gauge lines from Gawler to Angaston, Burra and Balaklava along with the moribund Kapunda line, and the narrow gauge isolated Eyre Peninsula network centred on Pt Lincoln and Thevenard. As well ASR will presumably retain the operation of the OneSteel iron ore lines at Whyalla and their equity and operations on the Darwin line. Given the parlous state of most of their track it would be surprising to see ASR in existence in their new form for very long. Eyre Peninsula has just been given \$40 million of federal and state funding to keep it afloat, while most of the broad gauge and some of the standard gauge has now been placed in suspense – 'service suspended'. Given the amount of funding required to revive these lines, particularly in the light of implicit ASR capitalisation of only around \$40 million, it is unlikely that ASR will be able to revive their residual network even if they want to. It may be that ASR is designed to be a 'staging post' to allow the main transaction to proceed rapidly without having to sort out the longer-term future in S.A.

Hands up those people who only five years ago would have bet their family fortune on QR being the operator of all the significant narrow gauge on the mainline, or that QR would own a reasonably modern fleet of high power standard gauge locomotives within six years. Not many hands there, is there?

Hardly had the buzz (and bottomless e-mails) from this event got warmed up when the federal Court found in favour of QR in the drawn out legal action between QR and PN over the Acacia ridge terminal in the southern suburbs of Brisbane. In a matter of only two days QR added 40 million tonnes per annum (and a handy portfolio of locomotives and rolling stock) to its armoury, and made the first breakthrough in opening up large capacity terminal access on a similar basis to track. In fact in some ways the second issue, terminal ownership and access, is the more fundamental issue for competition on rail. At the moment there are a number of smaller terminals that are open to all comers, but these have limited capacity and in general are inadequate for serious competition. Acacia Ridge was the Brisbane equivalent of Chullora, South Dynon, Islington or Kewdale – major inter-modal terminals which just coincidentally were all controlled and operated by Pacific National – a legacy of the formative days of National Rail. These terminals hold the key to access to the inter-capital market, with the alternatives, such as Fisherman Islands, Yennora, North Altona, or Port Adelaide being of limited or no value to potential new start operators. SCT, who have invested heavily in their east – west trains and small but functional terminals have been unable to get a foothold on rail on the east

coast – the result of which is that they have a north – south trucking service instead.

The decision in regard to Acacia Ridge should eventually allow any reasonable operator to get a foothold in the northern capital but of course there is still the issue of the other capital city terminals to be resolved, although there are glimmerings!

As if the two 'QR' events were not enough for the week the erstwhile partners in Pacific National, never the best of friends since the attempted takeover of Patrick by Toll, have now counter sued each other in the courts. Patrick are trying to get control of half of PN's capacity as apparently is provided for under the partnership agreement, while Toll are trying to have the two Patrick directors removed from the PN board on the grounds of being obstructive. It is clear from these actions that PN are a long way from being able to resume 'business as it used to be'. The best that they can achieve with a dysfunctional board and no effective chief executive is to limit the damage and try to keep the operation together as far as possible. With a newly ascendant competitor in the expanded QR, and a serious hole knocked in their network of inter-modal freight terminals with the loss of exclusive control of Acacia Ridge terminal it is quite possible that PN may find the going just too hard while they have their other self imposed liabilities.

While the Toll bid has stalled since the ACCC gave it the thumbs down, Patrick has made no secret of its desire to carve PN up. Toll are not at all taken with either of these developments (to put it kindly), hence the strong words and action to both continue the takeover bid and take Patrick to court. Despite this it seems increasingly likely that Toll's action will fail while the prospects for Patrick seem to have risen.

Should the carve up of PN come about there will be some parts of the property that neither will want, notably the Victorian track lease, and some that neither will want to give up, notably the capital city inter-modal terminals. In different and possibly quite obscure ways these situations could result in the eventual devolution of the infrastructure part of the rail network, which is essentially a monopoly resource, back in the public fold where the inherent but non cash box attributes of rail can be appropriately captured. The ARTC model, which has shown that a public corporation with a core business of successfully and efficiently maintaining track to meet growing rail business, coupled with other events in Tasmania and New Zealand, have perhaps given the clearest indication to the sort of direction that should be followed if we want to have any decent rail network left in years to come.

Of course there is much water yet to pass under the bridge, and no doubt a number of interesting surprises that will bob up at unexpected moments, but to some extent the rail industry is beginning to form up into a structurally and financially sensible arrangement that is showing some signs of maturity. The key to all this will be the futures of Toll, Patrick and Pacific National and that may be some time before being resolved. In the mean time revel in the week past, one that will be hard to beat regardless of the outcome with PN.

WHY RAIL MAKES A SUSTAINABLE CITY

A presentation by **Peter Newman** – Professor of City Policy, Murdoch University and NSW Sustainability Commissioner to a meeting sponsored by TransAdelaide held on 1st December 2005

Peter Newman is the author of "Cities and Automobile Dependence".

S Townsend wrote this report on the presentation.

The presentation was about sustainability and in order to understand sustainability the following definition was offered:

Sustainability – Reducing Ecological Footprint while simultaneously improving Quality of Life.

History of City Development

The history of the development of cities may be categorized into approximately the four following periods:

- i) Walking cities – Up until approximately 1850, the size of cities was limited by the practical limitation of the distance one could walk in a given time. The cities were therefore relatively compact and densely populated.
- ii) Transit cities (1850 – 1940) – The development of powered transportation systems allowed the development of public transportation systems. These systems, mainly based on rail transport allowed the cities to grow both in population and area. Population densities remained relatively high due to the need to remain close to the public transport systems.
- iii) Automobile cities (1940 to the present) – The development of the motor car and with it affordable private transport allowed the development of cities to extend beyond the previous city boundaries into new areas without the need to be related to any public transportation system. These new suburbs

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covered large areas and had low population densities. The size of these cities are now reaching a stage where traffic congestion, environmental and resource factors and the increasing cost of private transport, both the direct operating costs and the costs of providing the support infrastructure, are limiting the further growth and prosperity of the cities.

- iv) Nodal cities – The prediction is that future cities will be nodal cities with discrete medium to high population density nodes or city centres being linked by quality transport.

The Development of City Centres

Every Australian city has a development plan based on nodes or centres. For example in Sydney, city centres have been developed at Parramatta, Chatswood and Kogarah. For centres to work, they must have efficient transport systems between the centres. The development then must be transit orientated. A transit-orientated development must include:

- i) Centre plan – Where are there suitable locations for centres.
- ii) Rail Plan – Experience has shown that the rail system must be electrically powered.
- iii) Development Mechanism – A development mechanism is required that must be state based but with intervention by Local Government.
- iv) Financing Mechanism – A Public/Private funding mechanism is required in order to build the electric railway.

Why should development be based on Centres? The main reasons are:

- i) To enable efficient service provision
- ii) Public transport needs centers to become viable
- iii) Centres are essential for new economy jobs. People need to meet.

To be viable, Centres need to be of a minimum size. Experience suggests that viable sizes are:

- i) Local Centres – Have an area of approximately 1km radius and have 35 people and jobs per hectare. A minimum cut off point is approximately 10,000 people per square kilometer.
- ii) Town Centres – Have a 3 km radius or 3000 hectares with 100,000 residents and jobs.

Investment in rail transport makes centers work. A rail transport system attracts and anchors the developments by:

- i) Creating pedestrian traffic and a walking environment.
- ii) It has the capacity without requiring large areas for car parks.
- iii) Bus systems have been tried but have produced a reduced level of service, are susceptible to congestion in the city centre and are limited in their capacity to transport the required numbers of passengers.

Benefits of Rail Based Transport Systems

The experience in the USA has shown that rail systems work. They add value to a center and increase investor returns. As a result over 100 new projects are being developed. Centre development with rail-based transport has been shown to attract global city jobs and stop urban sprawl.

The City of Portland was the first to successfully use this concept. Many others have followed. In the city of Denver land values around stations have increased rapidly.

In WA the new Southern Railway out of Perth is being planned with developments around the stations. Private investors are keen to develop these areas as they have found that they can achieve a 15% increase return on investment compared with similar developments away from railway stations.

European experience has shown that cities with well-developed rail based public transportation systems are wealthier. Research shows that on average a car-based city spends 12.15% of its GRP on transport. By contrast rail based cities spend approximately 8%.

The research shows that there is no proven correlation between car use and wealth. An examination of Australia cities supports this.

Wealthy Australians are generally found in the inner areas of cities and as a result spend less on transport. Conversely the poorer residents live in outer areas and spend up to 40% of their income on car-based transport.

The increasing emission of greenhouse gases, high levels of road based transport deaths and increasing congestion support rail.

An examination of the various land transport options available show that not only does rail provide the maximum capacity, it also requires the smallest area of land. The capacity of the various modes is:

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- i) Heavy rail corridor – 50,000 per hour
- ii) Light rail corridor – 20,000 per hour
- iii) Busway – 5,800 per hour
- iv) Freeway – 2500 per hour plus parking costs

The issue of parking is one that is gaining prominence because of the area required to park cars but also cost both in the cost of parking and in the provision of parking infrastructure. Developers of inner city housing have come to realize that they can save approximately \$40,000 for each car park that does not need to be provided.

The actual cost of operating a car is not fully appreciated by most owners. Generally the cost of fuel only is considered. Fuel is in fact a small proportion of the full cost of operating a motorcar. The Tax office, which is not known for giving anything away, allows a rebate of 64c/km for business use. In reality the actual cost for driver only cars is most likely around \$2.00 per person km.

Unlike cars, rail has the advantage of using electricity, not oil. World peak oil production is possibly occurring now and will soon begin to decline. Demand will continue to rise rapidly. The prognosis is that the availability of oil will decrease and its price will escalate. In 50 years, oil may not be available. For further information on the future of oil, reference is made to a program broadcast recently on the ABC Catalyst Program.

Rail Transport in Perth

The city of Perth in WA is a good example of what happens when various transport modes are implemented. In the late 1970's the Fremantle rail line was closed and buses replaced the service. The road lobby predicted a substantial increase in patronage. In fact the opposite occurred with a 30% immediate drop in patronage. This situation continued until a change in government reopened the line. Immediately the line reopened the patronage figures returned to their original levels. With electrification and upgrading, the Fremantle line now carries a level of patronage far higher than was thought possible back when it reopened.

New urban centres are being developed as a result of the improvements to the rail line. The latest one is at Subiaco.

The development of the Northern Suburbs Railway has been a great success. It is now carrying a passenger load equivalent to an eight-lane freeway.

As mentioned above, the New Southern Railway is currently being built at a cost of \$1.8 Billion. It is a dual track system 80 kms long with a design speed of 130

km/hr and a one-way journey time of 48 minutes from Mandurah to Perth. When complete, the Perth rail system will have a route length of 280km with 72 stations; all built in 20 years.

In achieving this substantial result, political leadership was everything. In Perth, marginal seats were won on a policy of railway development. This has shown that investing in rail is good politics.

Development Requirements for Rail Based Transport Systems

Urban Centre and related transport developments require a statutory plan/development process to ensure development continues. Such developments cannot be left to Local Government. A wider vision is required and this means a regional planning resource.

Transport developments require a financing mechanism. The private sector has found way to find funds for other infrastructure developments. The rail industry can develop similar mechanisms that can provide a financial return and therefore be attractive to investors. These mechanisms can source funding from both the public and private areas and together in Public/Private partnerships.

With respect to the planning in Adelaide the situation is as follows:

- i) A Centre Plan exists but is not fully defined.
- ii) A Rail Plan has been proposed, it is currently weak but has potential.
- iii) No Statutory Development Process has been developed.
- iv) No Public/Private finance mechanism has been determined.

The current light rail initiative presents an opportunity to kick start major rail development plan.

Adelaide is well known for its bus based OBahn system. While it works reasonably well, it does have its issues. Some of these relate to congestion on the approaches to and within the city, limited future capacity and the cost of building further routes, which is similar to that of light rail. Further buses do not attract the private investment that is necessary to make future developments succeed.

While proponents of the OBahn system point out that passengers do not have to change transport mode to complete the journey to the city, the Perth experience has shown that, if a quick comfortable high quality alternative is provided, passengers are more than willing to transfer to rail.

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Summary

Experience in Australia and overseas has shown that:

- i) People prefer rail transport for its comfort and speed
- ii) Investors prefer rail transport related developments – they provide greater returns on investment
- iii) Rail transport has the capacity to meet future requirement
- iv) Rail based transport improves the environment and the sustainability of our cities
- v) Rail Transport is good politics
- vi) Quality fast rail transport makes urban centre development work

Adelaide now has the opportunity to invest and realize these benefits.

MEETINGS FOR 2006

Future Speakers/Dates/Topics				
Date	Speaker	Organisation	Topic	Venue
	No Meeting in March			
6/4/2006	Site Visit	Intercast & Forge	Tour of foundry including new facilities	Intercast & Forge, Wingfield - Joint with PWI
1-3/5/06	Core 2006			Melbourne
Late May 2006	Eminent Speaker Tour		TBA	IEAust Building – Bagot Street
	No Meeting in June			
6/7/2006	TBA			IEAust Building – Bagot Street
3/8/2006	R Nancarrow		History of Ultrasonic Rail Flaw Detection/ Current Practices	Riviera Motel and Function Centre – Joint with PWI
7/9/2006	TBA			Joint with IRSE
5/10/2006		ARTC	Structural Clearance Management	Joint with PWI - IEAust Building – Bagot Street
2/11/2006	Mike Sowden	ARTC	Wayside Detection and Wheel Profile Measurement	IEAust Building – Bagot Street
28/11/2006				RTSA AGM

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Articles or editorial comment for Newsletter are very welcome. We have over 100 members locally some of whom will have stories, events or developments of interest that could be reported in 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.

Send copy to the Editor, Stephen Townsend at st771048@bigpond.net.au or fax to 08 8297 0992.

Electronic despatch of Newsletter is undertaken by Malcolm Menadue – contact Malcolm on mnenadue@ozemail.com.au if you have any problems receiving Newsletter electronically or in hard copy. Note that electronic subscribers will get their Newsletters and flyers as soon as the editorial stuff is done, while the hard copy mail will of course be some days slower.

For all other matters relating to RTSA SA Chapter contact Robert Schweiger (Chairman) at e-mail robert.schweiger@jhg.com.au, or by phone on 0413 128 775.

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