

NEWSLETTER No 1/2007



Railway Technical Society of Australasia
SA Chapter
Engineering House, Bagot Street
NORTH ADELAIDE SA 5006

January 2007

NEXT MEETING

The next RTSA meeting will be held on

Tuesday 6th February 2007
at the Hyde Park Tavern,
187 King William Road, Hyde Park
commencing at 5.30pm.

The speaker for the meeting is the RTSA Eminent Speaker, who is:

Mr Ed Zsombor
Director of Rail Services Unit and
Provincial Railway Inspector – Saskatchewan, Canada.



“Transforming Canada’s Rural Railways”

Mr Zsombor will speak about the Saskatchewan experience of maintaining and operating short rail lines and regional rail.

This subject is quite topical through out Australia, as most railway operators have tended to focus on the long haul mainline operations and have neglected the short haul opportunities. As a result branch lines have become run down and many have been closed. The country railways of South Australia have probably been the most effected by this trend.

Here is a unique opportunity to hear how another country has tackled this issue.

Refreshments will be served after the meeting.

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.

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ED ZSOMBOR - Biography

Ed Zsombor is a Civil Engineer getting his degree at the University of Saskatchewan in 1967. He commenced work with Canadian Pacific Railway in Saskatoon and held various project management and divisional engineering positions in western and central Canada.

After leaving Canadian Pacific Railway, Ed went on to manage and start a steel manufacturing plant, expand the contract and land development divisions both in and around Canada and the United States for a family owned business in Thunder Bay.

Subsequent to finishing this commission Ed went into consulting. He was involved in various rail and transportation jobs around Canada, working on a service contract basis or as a subcontractor to architects, engineering firms and numerous local, provincial and federal governments.

During this consulting period Ed was involved with the Saskatchewan purchase of the thousand railway cars and setting up the Saskatchewan Grain Car Corporation and other duties for the province of Saskatchewan. He was involved with the development of the Road/Rail unit. Ed was also involved in the branchline rehabilitation "value for money" audits for the federal government being carried out in Saskatchewan and Manitoba up to and including Churchill.

Ed moved back to his home province in 1981 and started work with the City of Regina with their railway relocation project. While with the city, he was also involved with the city manager's office as the technical consultant manager responsible for various special construction projects and as well as some re-organizational and environmental work.

In 1997, Ed commenced work with the Department of Highways and Transportation in the Grain Rail Unit which has now become the Rail Services Unit. This unit is responsible for advisory services, the development of shortline railways and innovation as well as administering *The Railway Act* of Saskatchewan. Ed is presently the Director of Rail Services Unit and the provincial Railway Inspector.

He has been Mayor of the Town of Pilot Butte, a bedroom community near Regina, for the past 18 years.

LAST MEETING

The last meeting was the AGM held in 28th November 2006. The main task at this meeting was the election of the SA Chapter Committee for 2007. The results of the election were:

Chairman – Duncan McLeod
Secretary – Daniel Martucci
Treasurer – Michael Forbes
Committee Members - John Dring
Bill Edmonds
George Erdos
John King
Rob Schweiger
Steve Torok
Roger Wyatt
Stephen Townsend

Our guest speaker at the AGM was Mike Marshman who gave a very detailed and emotive description of his experience in the 1998 Sydney to Hobart Yacht Race when the flotilla was struck by very high winds and rough seas that caused a number of boats and three lives to be lost. The boat that Mike was on capsized and later sank, he was injured and eventually was rescued under very difficult conditions by a helicopter rescue crew.

Chairman's Chatter – Duncan McLeod

Although now all but a distant memory, the AGM dinner meeting in November must be one of the most successful yet.

A pleasant venue, good food, carefully selected wines, and a very entertaining guest speaker (albeit not on a railway topic) all contributed to a great evening. A new benchmark has certainly been set. Special thanks are due to our meeting sponsors – OneSteel, Connell Wagner, John Holland Rail, and Davison Earthmovers.

The AGM resulted in some changes to the Chapter Committee. Chairman Robert Schweiger was, due to the constitution now limiting the term of a Chairman, unable to re-nominate for that position. He is, however, able to remain on the committee. We thank Robert for his capable leadership of the Chapter over several years, particularly as chair of the CORE 2004 Darwin organising committee.

Malcolm Menadue did not seek renomination, after many years service to the committee. Grateful thanks are due to Malcolm for his meticulous work in maintaining e-mail addresses and distributing the monthly newsletter. Steve Torok has kindly offered to take up this role.

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The committee welcomes Michael Forbes as incoming treasurer. Michael brings with him experience in a similar role with IRSE.

Daniel Martucci was elected secretary, after a successful apprenticeship, having capably filled the role since Tom Hampton's relocation to Western Australia during last year.

Your committee's objective is to provide a full and well-balanced programme throughout the year. Suggestions for additional meeting topics are always welcome.

Early attention this year turns to the visit to Adelaide of RTSA's visiting eminent speaker, Ed Zsombor, who is Director Rail Projects for the Saskatchewan Highway and Transport Agency, Canada. Ed's topic is "Transforming Canada's Rural Railways".

To fit in with tour arrangements, the meeting will be held on the special date of Tuesday 6 February, replacing our normal Thursday meeting. See details elsewhere in the newsletter.

The eminent speaker's tour is generously sponsored by Worley Parsons, and our Adelaide meeting is a joint RTSA/PWI event.

Ed is also a keynote speaker at the forum on Future Frameworks for Regional Rail, to be held in Wagga Wagga on Thursday 1 February. Full details are attached to this newsletter. The forum will be presented jointly by RTSA and the Charles Sturt University Institute for Land, Water and Society.

With protracted debacles over the future of regional rail in several Australian states, both the forum and the eminent speaker's tour are indeed most timely.

THE OBSERVATION POST – Max Michell

In the beginning, when sail ruled the sea, land based connections determined how useful a port would be. Rail initially developed to a large degree to fill this need and to extend the port tentacles well into the interior of the country. In fact these rail connections were the means to open up the country that began, and remains, a land of mainly coastal fringe dwellers. Over time changes have overtaken the 19th century concept of a port, none more so that the advent of widespread international containerisation in the 1970's. Coupled with this has been the growth of large distribution centres linked by small volume on demand deliveries to end-users – the much overplayed 'just in time' concept. The end result is that away from bulk freight rail now carries a minor part of the import – export freight these days. The other result is that a disproportionate number of import containers (in particular) are destined for users

(including distribution centres) within a short distance of the port.

Sydney was rather slow off the mark with containers. The original port facilities were at Pyrmont in a constrained area backed by a vocal residential population with rather congested road and rail links to the rest of the landside. Melbourne on the other hand made good use of its position as the small manufacturing centre of Australia and created a completely new port, although still with constrained land-side transport links. In time Sydney bit the bullet and moved its activity to a new site in Botany Bay in an area already heavily industrialised. Rail facilities to the new port were installed almost as an afterthought (more as a result of port and stevedore policy than from disinterest by the railway) and were under utilised right from the start. In time the less than adequate road system became something of a political issue while shortage of suitable container handling land near the port was giving rise to the concept of 'satellite terminals'. Hence the political dictum that 40% of the container traffic to and from the port should be on rail.

Botany currently handles around 1.4 million TEU (twenty foot equivalent) each year with an underlying growth of around 7.5%. At this rate the port will reach its current installed capacity of around 1.9 mill TEU in 2010. A third 'port', with capacity of around 1.6 mill TEU p.a. is planned (although not without some controversy) which will bring the port up to around 3.5 mill TEU at some time prior to 2020. A rail link to the new port, independent of existing port sidings, is incorporated in the plan, along with enhancement of the current rail facility at Patricks, which will give 650 metre loading sidings for all stevedores in the port.

Rail currently handles perhaps 10% of this task or around 140,000 TEU p.a., through satellite terminals at places such as Leightonfield, Yennora, Camellia and Minto in the Sydney area and at various locations in the country such as Narrabri, Wee Waa, Blayney, Dubbo, Warren, Griffith, Leeton, Bomen and Wodonga. The country locations mainly load for export, with empty containers being railed from Sydney for that purpose. Most of the existing trains serving the Sydney satellite locations are less than the future train length of 650 metres.

What if rail was carrying the postulated 40% of containers to and from Botany? Rather than 140,000 TEU it would be handling 560,000 TEU, a task that would require four times the number of existing size trains or (hopefully) by using full length trains would require only 20 trains per day everyday of the year. Only!! A 650 metre train arriving or departing just about hourly every day, every week, every year. By 2010, when the port is predicting a throughput of around 1.9

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million TEU p.a., the notional rail task would be 760,000 TEU p.a. while at its longer term capacity of 3.5 mill TEU the rail task would be equal to the current port throughput of 1.4 mill TEU.

However admirable the concept of '40% on rail' may be there are a number of quite significant issues that need to be resolved for this to happen. The first is where would such large numbers of containers go to? The Port of Sydney is planning a 300,000 TEU p.a. facility at Enfield, which at this stage looks as if it may eventually get through all the planning pitfalls and become a reality. Beyond that there is potential for expansion at Minto from 40,000 to 200,000 TEU p.a. (also increasingly looking like a 'probably') and a new facility at Moorebank that would service 500,000 TEU p.a. Combined these would provide capacity through into the 2020's (on current port predictions). Beyond these proposals there have been suggestions for other large scale facilities at Ingleburn (Patrick – but since the Toll takeover status of this proposal is not known), Menangle, St Marys and Eastern Creek. Presumably the smaller existing facilities could keep operating although their contribution cannot amount to much of the total activity. Notably among these proposals there are no satellite terminals north of Sydney apart from Newcastle, which has its own container port expectations.

The second issue is one of track capacity. From Botany to Enfield the goods line provides the basics, although enhancement of the single track Botany – Cooks River section would be needed. Equally between Enfield, Moorebank and Minto (and further south) the planned Southern Sydney Freight Line will provide a suitable freight track but possibly requiring some capacity enhancement as local container business grows. Access to locations on the Western line would have to be fitted into a continuing curfew situation since a dedicated freight line in that direction is unlikely. Access to Newcastle, or any proposal for an intermediate northern 'on line' satellite terminal, will presumably be enhanced by developments that are being planned by RailCorp and ARTC to alleviate curfew constraints for north – south freight.

The third issue is one of above rail resources. Even if terminal operations were to be streamlined there would be a need for a significant number of additional locomotives and wagons. Contrary to the wisdom applicable to longer hauls, the port – satellite terminal trains could be made up using relatively old and inefficient (but totally reliable) equipment that suited the business. These trains will spend much of their time in terminals and only a small proportion out 'on the road', so things like distance based maintenance costs and fuel will not loom large in the scheme of things. Despite this there is little doubt that somewhere in the system

there will need to be investment in locos and wagons, even if it is for long haul to allow the older gear to be cascaded down to the port business. As noted in a previous Newsletter, this is not something that is on the 'above rail' operator's radar right at the moment.

The fourth issue is one of terminal management and handling. Traditionally container trains arrive and stand while lifting equipment and usually trucks or tractor trains move along the standing wagons lifting containers on and off the train. In the port business there is a much better opportunity to lift direct from stack to train, and vice versa, than at the domestic inter-modal terminals but even in this case there may be more efficient ways of dealing with frequent standard consist trains. Ships these days are up to 6000 TEU so there is little benefit in even attempting direct tranship to any form of land-side transport. The practice is to stack the arrival containers for subsequent clearance by truck or train, while in the other direction deliveries over several days will be used to 'build the load' for a ship. Something similar, but on a much smaller scale happens at the satellite terminals with train loads being grounded for later individual delivery by road. In all this there may be some process changes that would reduce amount of terminal handling and the attached costs that is one of the millstones for inter-modal rail. In this area in particular there is an opportunity for some lateral thinking, which would be helped by some good process engineering. So for instance rather than take the container to the train is there a case to be made to take the train to the container? Rather than have remote dead end sidings at the back of the wharf is there a case for a balloon loop type concept? Is there scope for a facility that allows an incoming train to be left and the locos immediately drop onto a standing loaded rake, thus enhancing both loco and rolling stock utilisation?

None of these concepts are new; rather they are used on other parts of the rail network for other traffics. The port business not only presents an interesting short haul opportunity (despite all those parrots who keep babbling the 'long haul' mantra?) but because of its particular nature would allow for some innovative thinking in the way of train operations and terminal interfacing, some of which might also have a wider application to the seriously long haul domestic container business.

The port-rail business has relevance to all capital cities where there are regular ports of call by large overseas container ships. Sydney is probably the choice of a prototype port since its geography and relatively poor urban road network lend themselves to distributed container terminals where rail is an option, but sooner or later other cities are likely to find something similar is required. Melbourne talks of a plan for 30% to be on rail by 2010 for instance despite the difficulties of a two-gauge problem. Fremantle already has a regular rail

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link to Kewdale, although still handling a small share of the total containers, while Brisbane is possibly unique in that it has quite substantial land available to conduct not only port container business but to provide capacity for domestic containers as well. There are other port related short haul opportunities among which the import motorcar business from Port Kembla to Sydney (and NSW?) is probably one of the more interesting. The same issues will apply to this sort of business as for the container business.

The short haul port traffic will not just devolve to rail as a result of a political dictate. Rail needs to be proactive in the running of trains, interfacing at terminals and provision of adequate but cost effective resources if this opportunity is to be realised. For many years rail has competed with the burgeoning road industry on a terminal-to-terminal basis rather than on a door-to-door basis. The consequence has been that the 'doors' of industry are now mainly located well away from direct rail access. This has been a long drawn out but costly mistake on the part of the rail industry. The short haul port business does not have sufficient margin to afford such a *laisse faire* approach, even if the stars are lined up in rail's favour in other respects.

Just for Fun

Acknowledgement to the RTSA Sydney Chapter Newsletters for the following two articles:

1. Consultants

A shepherd was herding his flock in a remote pasture when suddenly a brand-new BMW X5 advanced out of a dust cloud towards him. The driver, a young man in a Broni suit, Gucci shoes, Ray Ban sunglasses and YSL tie, leans out the window and asks the shepherd, "If I tell you exactly how many sheep you have in your flock, will you give me one?"

The shepherd looks at the man, obviously a yuppie, then looks at his peacefully grazing flock and calmly answers: "Sure, why not?"

The yuppie parks his car, whips out his Dell notebook computer. He connects it to his AT cell phone, surfs to a NASA page on the Internet, where he calls up a GPS satellite navigation system to get an exact fix on his location. He feeds it to another NASA satellite that scans the area in an ultra-high-resolution photo. Then the young man opens the digital photo in Photoshop and exports it to an image processing facility in Hamburg. Within seconds, he receives an email on his Palm Pilot that the image has been processed and the data stored. He then accesses a MS-SQL database through an ODBC connected Excel spreadsheet with

hundreds of complex formulas. He uploads all of this data via an email on his Blackberry and, after a few minutes, receives a response.

Finally, he prints out a full-colour, 150-page report on his hi-tech, miniaturized HP LaserJet printer and turns to the shepherd and says, "You have exactly 1586 sheep."

"That's right. Well, I guess you can take one of my sheep," says the shepherd. He watches the young man select one of the animals and looks on amused as the young man begins to stuff it into the trunk of his car.

Then the shepherd says to the young man: "Hey, if I can tell you exactly what your business is, will you give me back my sheep?" The young man thinks for a second and then says, "Okay, why not?"

"You're a consultant," says the shepherd.

"Wow! That's correct," says the yuppie, "but how did you guess that?"

"No guessing required," answered the shepherd. "You showed up here even though nobody called you; you want to get paid for an answer I already knew; to a question I never asked; and you know nothing about my business. Now give me back my dog."

2. FOR LEXOPHILES (LOVERS OF WORDS)

1. A bicycle can't stand alone; it is two tired.
2. A will is a dead giveaway.
3. Time flies like an arrow; fruit flies like an apple.
4. A backward poet writes inverse.
5. In a democracy it's your vote that counts; in feudalism it's your Count that votes.
6. A chicken crossing the road: poultry in motion.
7. If you don't pay your exorcist you can get repossessed.
8. With her marriage she got a new name and a dress.
9. Show me a piano falling down a mineshaft and I'll show you A-flat miner.
10. When a clock is hungry it goes back four seconds.
11. The guy who fell onto an upholstery machine was fully recovered.
12. A grenade fell onto a kitchen floor in France, resulting in Linoleum Blownapart.
13. You are stuck with your debt if you can't budge it.

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14. Local Area Network in Australia: The LAN down under.

15. He would often have to break into song because he couldn't find the key.

16. A calendar's days are numbered.

17. A lot of money is tainted: 'Taint yours, and 'taint mine.

18. A boiled egg is hard to beat.

19. He had a photographic memory that was never developed.

MEETINGS FOR 2006/2007

Future Speakers/Dates/Topics				
<u>Date</u>	<u>Speaker</u>	<u>Organisation</u>	<u>Topic</u>	<u>Venue</u>
6/2/2007	Ed Zsombor	Province of Saskatchewan	Short Haul and Regional Railway Lines	Hyde Park Tavern, Hyde Park
1/3/2007	TBA		V'Locity Railcar	
5/4/2007	TBA		Glenelg Tramline Switches Upgrade	
3/5/2007	TBA		TBA	
7/6/2007	TBA		LeFevre Peninsular Railworks	
7/6/2007	TBA		Refurbishment of 2000 Class Railcars	
2/8/2007	TBA		G&W Operations in SA	
6/9/2007	TBA		TBA	
4/10/2007	TBA		Adelaide Tramline Extensions	
1/11/2007	TBA		TBA	

Note - All 2007 topics to be confirmed.

KEY RTSA CHAPTER COMMITTEE CONTACTS

Chairman	Duncan McLeod	08 8338 7919
Treasurer	Michael Forbes	08 8351 4222
Secretary	Daniel Martucci	08 8204 8213
N/L Despatch	Steve Torok	08 8264 2552
N/L Editor	Stephen Townsend	0400 135 481

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 Steve Torok – contact Steve on steve@tge.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 work is done, while the hard copy mail will of course be some days slower.

For all other matters relating to RTSA SA Chapter contact Duncan McLeod (Chairman) at e-mail dmconsulting@aapt.com.au, or by phone on 08 8338 7919.

Disclaimer

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