

RTSA SA CHAPTER NEWSLETTER

October 2011 Edition



NEXT MEETING: Train Planning (CORE paper)

Train Planning (CORE paper) Ian Fox Network Modeller ARTC

Ian's presentation outlines the network modelling that ARTC has done of future train operations on the North-South (Melbourne to Brisbane) rail corridor and its findings.

ARTC has invested heavily in recent years on this rail corridor with a number of projects such as:

- the replacement of electric staff working between Casino and Acacia Ridge;
- the construction of new passing loops and the extension of existing passing loops on single track line; and
- double tracking between Seymour and Wodonga, made possible by gauge conversion of the broad gauge track,

With all these different projects coming online ARTC identified the need for network modelling to determine how all these different projects will interact and to quantify how much benefit ARTC and the rail operators will receive. This modelling was done in house using RailSys by Ian, in close cooperation with other ARTC staff members.



Ian was born in Wellington New Zealand, and grew up in New Zealand, Samoa and the Philippines.

After completing a degree in Aerospace Engineering from Embry-Riddle Aeronautical University in the USA, Ian worked in the New Zealand aerospace industry for a short while before switching over to the railways.

Ian has worked at the Hillside railway workshops in Dunedin and for Halcrow as Network Modeller based in Sydney.

In 2008 he joined ARTC and moved to Adelaide where he has undertaken a number of projects such as modelling train operations on the North South corridor, the impact that the Advanced Train Management System (ATMS) will have on ARTC's operations, and coal train operations in the Hunter Valley.

TECHNICAL PRESENTATION

VENUE:

Engineers Australia
Sir Robert Chapman
Theatre
Level 11
108 King William St
Adelaide

DATE:

Thursday 3rd November
2011

TIME:

5.30pm (for 6.10pm start)

Light Refreshments will
be provided.



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CHAPTER MEETINGS 2011

Tuesday 29st November 2011
AGM & Dinner
Dr David Cruickshanks-Boyd
"Engineers on the right track"
Venue - Hyde Park Hotel

Publisher

This newsletter is a publication of the South Australian Chapter of the Railway Technical Society of Australasia. Opinions expressed within are not necessarily those of the Chapter, Society or Editor.

Contributions

Contributions, including news, opinions, or letters to the Editor, are always welcome. Send material by e-mail to saeditor@rtsa.com.au

Continuing Professional Development

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

RTSA Website

The RTSA website www.rtsa.com.au has details of RTSA activities, including future meetings and reports from past meetings, for all Chapters. Membership information for potential new members and an application form may be found at www.rtsa.com.au.

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October 2011 Edition Editorial



End of an era

It is a new job, a new industry and a new start for our Chairman Daniel Martucci. Along with his change in circumstances and role, is a decision to stand down as RTSA SA Chapter Chair.

It is hard to imagine Daniel not being in the chair, it is all I have known (I still consider myself a 'newbie'). He has proved to be a popular Chairman.

In Daniel's final chatter he calls for candidates to put themselves forward for the position as SA Chapter Chair. As Daniel says, it would be a first to have a contested selection for Chair.

I would urge all our members to consider taking on this very important role, one that Daniel has done so well for two years.

In this month's chatter, Daniel considers two things, the rise and fall of transport solutions and the pros and cons of high-density city living. As an aside, with a budding concert pianist and a budding Ginger Baker I am glad that I am in North Adelaide and that family is not.

In some way I can relate to Daniel, as I have moved from a small village in the depths of Staffordshire in the UK, to accommodation in Adelaide that is easily walkable from the CBD. Also, although I now own a car, it is only used at weekends and purely for pleasure, which is a complete reversal of the situation in the UK. This is because; to enjoy a village life I had a daily

commute of about 30 miles each way. A journey that was, by necessity, made by car.

There has not been any correspondence to the SA chapter this month. I would remind all our members that we welcome correspondence of all kinds; news, points of interest, activities that members may be interested in or our member's thoughts and views on recent rail related engineering events.

The last event was a visit to Dry Creek depot and while there is no presentation related to this I do have some photographs at the end of this newsletter.

It is my intention that any future presentations will be made available on the RTSA website under the SA chapter 'tab'. I am advised that this will have to wait until the website has been updated and site access is secured by member log in. to date there is no movement on this matter.



Russell Fuller – Newsletter Editor, RTSA SA Chapter



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Chair's Chatter: End of an Era



THE BACKYARD, the blue heeler and the BBQ: taken for granted at best, vilified at worst, there is something to be said for the clichéd “Great Australian Dream”. Come ‘round and see.

Our country's urban form defines its transport, rail-based or otherwise, and changes in it are said to be afoot. Enter low-density suburbia, developed after World War Two; the catalyst was an affordable, rapid, sheltered, secure and adaptive mode of transport that offered both multi-passenger and cargo-carrying capacity with infinite route-flexibility, free of any timetables: the ‘car’. Its game-changing conveniences remain very *inconvenient* for those in the business of trying to reduce its use.

There are two solutions to this problem, in the context of population growth. One is to replicate the configuration of pre-war suburbs in the post-war ones with round-the-corner access to high-quality public transport everywhere, but you can imagine the cost. The other is to densify centres in suburbia that are co-sited with transit hubs, the idea being that at least the additional population has better access to public transport and is thus more likely to use it. This concept is measured and sound, except if some of this additional population prefers to live as almost everyone else did, up to then ...with privacy and pets, a garden and room-to-grow.

Is this an ‘sustainable’ aspiration for people to have? It's a moot point: in the long term we would have to replace the arable land lost to what we now call ‘sprawl’ - but hey, all we need is water; the Outback is fairly large. But is it an ‘appropriate’ aspiration? No way, according to one point of view which says *any* growth should *only* be in high-density housing - and please may the outer suburbs wither on the vine so we can all start again!

Having just moved from a seaside outer suburb into high-density accommodation 2.5km from the CBD, you would think I subscribe to the latter view. Certainly the proximity is very convenient, and realising a lifelong ambition of living close enough to cycle to work in normal clothes has been great. This is the sustainable, ‘appropriate’ dream exhorted by so many with an almost religious zeal – but unlike many of these individuals, we are actually living it, so we can see its drawbacks.

Screaming siblings, defecating dogs or boisterous BBQs are not for here. We're lucky to have a huge terrace but it is a hard place, devoid of much privacy, with a kid-unfriendly balustrade and a single outlook that doesn't prevent cabin-fever. Internal walls are industry-standard but a 7-year-old's piano lessons would be a severe disturbance, let alone a 17-year-old's drum practice.

It's stuffy. Opening a window in anything but a penthouse does nothing - so fans are on all night, and even a 25 degree day needs air-con. So much for energy efficiency and less carbon footprint-guilt.

It's artificial. There's no shade, greenery, natural coolness or scent in the air. This only strikes you when strolling outside - in the lush, old-school inner suburbs. Once there, you also see solutions to those other drawbacks above and realise that the ‘Great Australian Dream’ was older than you thought... Housing in the inner suburbs largely offers that same lifestyle, but quickly suffered one big difference: affordability.

Cars largely solved that problem. They could arguably be called a vehicle of social equity in how they facilitated most socio-economic groups being able to still achieve what was considered a healthy lifestyle. Ironic then that cars, and this lifestyle, now often seem considered the root of quite a few evils by many groups. But here's a tip: before individuals in these groups make you feel like a dose of self-flagellation, just ask ...where do *they* live?

IN OTHER NEWS, this is my last column - I have resigned from DTEI and am changing industry.

Over ten years with rail, transport and Government has been enjoyable and interesting, and I have developed many great relationships that I will miss, but it's time for the next step. Having passed this crossroads, and being wrapped up in our wedding planning next year, I have also decided not to stand for the Chapter Chairmanship re-election at the 29 November AGM. We already have a strong new candidate but I would encourage more to get involved and contest this challenging but satisfying role. All the best!

Daniel Martucci – Chair, RTSA SA Chapter



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September 2011 Edition Meet the Team



This month we spotlight Stephen Townsend another of our longer standing SA Chapter Committee members.



Stephen Townsend is a Civil Engineer with 35 years experience and who has specialized in rail infrastructure engineering for the past 30 years.

He has had a varied career including heavy engineering design at the Port Kembla Steelworks, Track Engineer on the Mt Newman Railroad, rail marketing with BHP Long Products Division and Principal Engineer Product Development, Trak-Lok designing and marketing steel sleepers.

For the past 7 years Stephen has been employed by TransAdelaide/Public Transport Services. 4 years of these years have been spent providing a key role in the many projects associated with the Rail Revitalisation.

Stephen became a member of the RTSA shortly after its inauguration and has been a committee member for 7 out of the past 8 years. He was also a committee member on the 2004 CORE Committee and refereed a number of technical papers for the 2008 CORE conference in Perth.

Stephen has been a member of the Permanent Way Institution for the past 30 years and for his role of Secretary of the South Australian Section for the past 18 years he has been awarded the position as Honorary Life Member of the PWI.

Stephen has written and presented a number of technical papers at CORE and RTAA conferences, RTSA and PWI meetings and has spoken about various aspect of infrastructure engineering at seminars conducted by the PWI South Australian Section.

Stephen is married with two teenage children.

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October 2011 Edition - Future Events



Advance Notification of next year's RTSA Awards

Please note that nominations for the 2012 Railway Engineering Student Thesis Award and the Wheel-Rail Interface Award are now being taken.

For both awards the closing date is Friday 24th November 2011.

Both awards attract prizes of:
\$4000;
A plaque; and
One year's free membership of the RTSA.

Full details can be found in the March newsletter.

AusRAIL PLUS 2011 22nd – 24th November 2011 Brisbane Convention & Exhibition Centre

100 senior and technical rail executives
addressing the conference agenda

Over 300 exhibitors filling 15000sqm of the
Brisbane Convention and Exhibition Centre

Over 1000 representatives from across the rail
spectrum attending the conference
Over 3000 trade visitors moving through the
exhibition hall

During the three days, speakers from all over the
world will deliver presentations on cutting edge
developments in customer relations and the very
latest innovations essential to the future of rail

For this year's conference the RTSA Technical
Stream lectures will focus on Rollingstock, CBD
Underground, High Speed Rail, Management and
Operations.



Highlights of AusRAIL PLUS 2011 include:

- Rail Suppliers CEO Forum
- AusRAIL PLUS 2011 exhibition with over 300 companies
- ARAs AusRAIL PLUS Gala Dinner
- RTAAs AusRAIL PLUS Yellow Tie Dinner

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October 2011 Edition - High Speed Rail UK



Shaping the debate on high speed rail



United Kingdom:

Reflecting our goal to encourage knowledge transfer across the global rail industry, and expanding our portfolio of business information media, Railway Gazette held its first interactive webinar on June 8

Moderated by Editor Chris Jackson, the debate 'High Speed Rail in the UK: Making the Case' was broadcast live from the London Stock Exchange. Sponsored by Bombardier Transportation, the event attracted more than 400 registered participants from over 40 countries.

The four guest panellists contributed a range of opinions, experience and insight to a wide-ranging discussion. Jim Steer from lobby group

Greengauge21 outlined the potential benefits of both the UK government's proposed High Speed 2 project and a wider national network, whilst Jerry Marshall, Chairman of AGHAST, a federation of campaign groups opposed to HS2, raised concerns about the viability of a business case based on very long term assumptions and questioned whether further upgrading of conventional routes would suffice

Anton Valk, Chief Executive of Dutch-owned train operator Abellio, offered an international overview of high speed rail experience, and Colin Walton, UK Chairman of Bombardier Transportation, outlined the importance of strategic investment in rail to the future of the supply industry.

The webinar is now available to [watch on demand](#), including the feed of viewer comments and feedback received during the presentation. Viewers are invited to continue the debate on Twitter using the hashtag #HSUK, or via the [Community section of www.railwaygazette.com](#).



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October 2011 Edition - Heavy Rail Canada



AMT electro-diesel arrives in Montréal



Canada:

Montréal commuter rail authority Agence Métropolitaine de Transport took delivery of its first Bombardier-built ALP-45 electro-diesel locomotives on June 9. The first of 20 locos was officially received by AMT President & CEO Joël Gauthier and the Vice-President of Business Development & Communications for Bombardier Transportation North America Ann MacDonald.

Built at Kassel in Germany, the locomotive was shipped from Hamburg to Newark, New Jersey, and moved to Montréal under its own power; it will be commissioned at AMT's Saint-Eustache depot where the Deux-Montagnes commuter EMUs are maintained. The remaining locos are to be delivered at the rate of one a month, allowing AMT to expand services on its five existing lines and open the Train de l'Est route now under development.

'The acquisition of these all-new locomotives will open the door for some clear improvements throughout greater Montréal's commuter train network', said Gauthier. 'Combined with the deployment of 160 double-decker passenger cars, these locomotives will increase the rush-hour capacity of AMT commuter trains by 70%' accommodating up to 43 000 additional trips per day.

The dual-mode locomotives were ordered in August 2008, following a request for proposals issued jointly with New Jersey Transit, which is buying 26 ALP-45s. AMT's C\$236.3m order includes an option for a further 10. Its investment is being 75% financed by the Ministère des Transports du Québec.

AMT says the fleet expansion was 'imperative', as commuter rail ridership had more than doubled in the 14 years since the authority took charge of the services. Gauthier confirmed that 'electrifying the entire AMT network is now a distinct possibility', adding that the results of a feasibility study being undertaken by AMT and local electricity supplier Hydro-Québec 'are expected very soon'

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October 2011 Edition - High Speed Rail Spain



High speed electro-diesel trainset on test



SPAIN:

During a test run on the high speed line between Ourense and A Coruña on September 20, Development Minister José Blanco announced that RENFE would introduce Class 730 gauge-changing electro-diesel trainsets on services between Madrid and the northwestern region of Galicia in mid-2012.

The trainsets would enable Madrid - Galicia journey time to be cut to less than 5 h, using high speed infrastructure between Madrid and Olmedo, the non-electrified 1 668 mm gauge route from Olmedo to Ourense, and the Ourense - A Coruña high speed line which is due to open on December 10.

Under a €74m project managed by RENFE's Integria rolling stock maintenance and assembly business, 15 Talgo/Bombardier Class 130 trainsets are being converted to the Class 730 by replacing the end trailer cars with two new cars each housing a 1 800 kW MTU 12V 4000 R43L diesel engine and traction alternator.

this Dual Mode train will allow AMT to operate through the Mount Royal Tunnel under electric operation (as ventilation is an issue), whilst still enabling services to be delivered to lines that are yet to be electrified

Some statistics of the Class 730 are:

Top speed of 180 km/h in diesel mode, rising to 220 km/h under 3 kV DC and 250 km/h on 1 435 mm gauge high speed infrastructure

Weight	131 tonnes;
Axle load	32.7 t;
Standard Gauge:	(1,435mm);
Length	21 m; and
Width	3.31 m.

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October 2011 Edition - Rail Links Australia



Funding for Maldon to Dombarton Rail

Link by Rail Express.com.au



The Maldon to Dombarton Rail Link would provide more direct access to Port Kembla.

The Illawarra region's long awaited Maldon to Dombarton Rail Link has moved from "possible to probable", as the Prime Minister yesterday announced \$24.5m in federal funding to progress the project.

The funding would see the preparation of detailed design work for civil, structural, geotechnical and track work commence this financial year, as well as a "realistic" construction timetable and project cost estimate

The link would involve laying 35km of standard gauge track connecting the Main North South Line directly to Port Kembla via Dombarton, two passing loops, bridges over the Nepean and Cordeaux Rivers and one of Australia's longest tunnels.

Julia Gillard's announcement follows the release of a feasibility study for the project which found the rail line would support New South Wales' resources sector by providing more direct access to Port Kembla. The study found the railway line would also free up capacity along the existing Illawarra Line for additional passenger services.

The government said the funding would see the project become "shovel ready" and once pre-construction activities were completed the project would be considered for inclusion in the government's next Nation Building Program. The government's current \$36.2bn Nation Building Program covers a six year period from 2008-09 to 2013-14.

The Maldon to Dombarton Rail Link has been talked about for over 30 years. First mooted in 1979 and then cancelled in 1988 by the incoming Liberal Government, the link has the potential to further cement the Illawarra's importance as an "industrial powerhouse", the government said.

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October 2011 Edition - Last Months Presentation



Dry Creek Maintenance Depot

Our September event was a visit to the depot at Dry Creek operated by Bombardier. It proved to be a very popular event which was well subscribed. At the end of the tour an excellent barbeque was provided.

Our hosts from Bombardier Transportation were Brenton Valladares and Roland Muth and we extend our gratitude for conducting the tour, we really are appreciative of their time and enthusiasm.

I took some photographs of the occasion and have included some of them here;



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October 2011 Edition - Last Months Presentation

