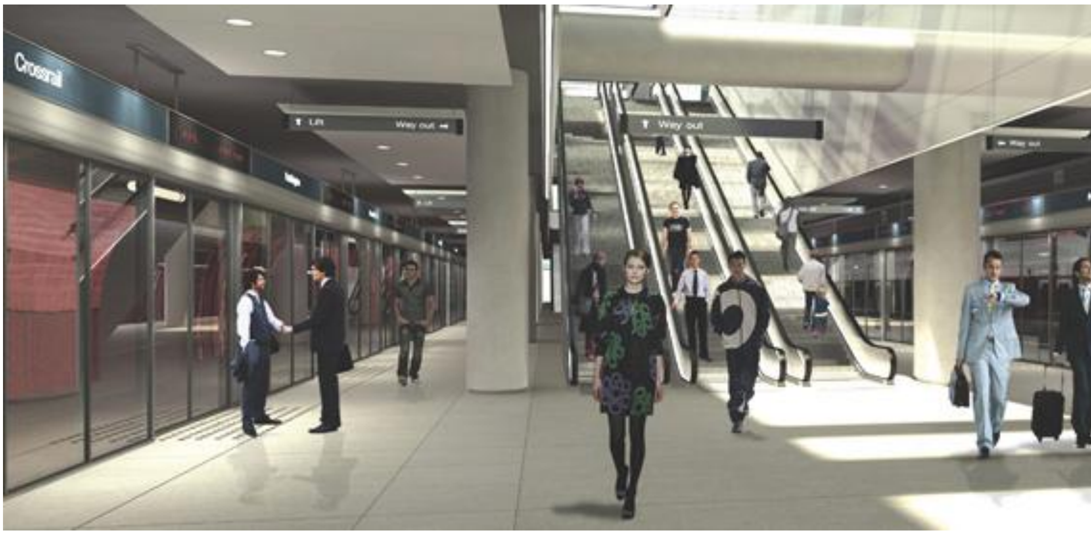
RTSA NSW CHAPTER NEWSLETTER

FEBRUARY 2011 EDITION

NEXT MEETING

CROSSRAIL- INTRODUCTION AND A DESIGNER'S POINT OF VIEW

Dr Mark Raiss, URS / Scott Wilson



TECHNICAL PRESENTATION

VENUE:

Temporary Venue
Pymble Room, Ground Floor, South Tower, 477 Pitt St (between Central Station and Hay St)

DATE:
Wednesday 2nd March 2011

TIME: 11.30 for 12.00

LIGHT REFRESHMENTS WILL BE PROVIDED

Dr Mark Raiss will introduce the Crossrail scheme, Europe's single largest infrastructure project with a current budget of £14.5bn. Mark will explain the history of Crossrail's development, describe what it entails, the service it will provide and the funding mechanisms to achieve those ends.

He will then proceed to describe the procurement and development of design including both design management and value management issues. He will also discuss the procurement of the Construction, covering issues such as the handling of excavated material.

Finally, Mark will present his view on Paddington and Farringdon stations, two of the major designs packages which URS/ Scott Wilson has been undertaking. Many of the topics Mark will discuss will be directly relevant to North West Rail Link.

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WORDS FROM THE CHAIR – KATHARINA GERSTMANN

Hardly has one conference ended than the next one is on the horizon. Well not quite, but planning for AusRail Plus 2011 (Brisbane from 22^{nd} November) is well underway. The call for papers is scheduled to close early next month on 4^{th} March.

This year's theme is INNOVATION AND CUSTOMER RELATIONS and with over 30 technical papers to feature on the AusRAIL PLUS agenda, you have a great chance of showcasing your latest project. The committee will be looking for the papers that examine the most up-to-date technical innovations across the rail industry so make sure your proposed paper pushes the boundaries in your chosen field.

A few of last year's technical presentations highlighted how innovative technological initiatives are enhancing the productivity and efficiency of rail transport. But these were just some examples of the way in which innovative technologies are supporting the growth of the rail industry, and to meet the demands being placed on rail, we cannot afford to be complacent. Innovation and the development of technology are critical to the future success of the industry.

That is why RTSA's first objective is to ‚promote technological and management excellence in the railway industry'.

On a different matter:
The RTSA's Executive Committee will hold its first meeting for this year on 11^{th} -12^{th} March in Brisbane and I shall report on this shortly after. Principal issues to be discussed are the progress on the RTSA's re-branding and website design projects and the appointment of the new membership sub-committee. This sub-committee is being established to continue expansion of the total membership of RTSA, and to widen the classes of membership of RTSA to include more women, students, young professionals and technical personnel who are not members of EA or IPENZ, and to monitor and recommend measures to ensure that advertised benefits are delivered to our members.

This leads me to our next item: new members. As usual I would like to extend a warm welcome to all our new members, namely:

Stuart Allabush, PB
Matthew Bogunovich, Student
Michael Boyle, Student
Michael Hughes, Skilled
Andrew Lambden, Thiess
Mark Leadbetter, PB
Stamatios Roumanis, Student
Matthew Whyte, Student

Looking forward to seeing you at our March meeting,

Katharina Gerstmann
Chair – NSW Chapter

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TEMPORARY MEETING VENUE CHANGE

Our usual Central Station meeting room has been ‘closed’ for renovation, so we will be unable to meet there for a while. Instead we have been able to get a room in 477 Pitt St for the duration – the **Pymble Room on the ground floor of the South Tower at 477 Pitt** to be exact. The building is between Central Station and Hay St on the western side of the street.

POINT OF VIEW – MAX MICHELL

There have been an occasion or three when I have been rather critical of the rail privatization model adopted in this country. Separation of train operations from the infrastructure was supposed to encourage competition on rail, to the benefit of rail users as well as the economy as a whole. There are some aspects of this model which have worked – notably the re-awakening of political interest in investment in main line rail infrastructure. In the last decade or so government investment in rail has gone from near enough to nothing to a reasonable amount, sufficient to recover deferred maintenance and add a degree of improvement to the main part of the inter-state network. However the creation of a disconnect between the infrastructure and train operators has had some rather unfortunate downsides,

In the case of the east-west routes modest improvements have enhanced the already impressive share of contestable traffic that is on rail, but on the north-south corridor very significant expenditure does not look to have done anything to reverse the ongoing slide of rail toward irrelevance. So it would seem that infrastructure, on its own, is not the determinant of market share.

On the other hand the above rail operators which on the rather thin ‘single route’ network that we have here must be intended to be the ‘on rail’ competitive part of the industry. Of course the broader view will highlight the fact that rail on rail is not the competitive issue so much as competition between rail and road.

Above rail competition would be well and good if the main players had equal ability in the market – access to locomotives and rolling stock, access to appropriate terminals and a well informed market place with real customers making the choice between carriers. In fact the operators are far from this idealized situation – there are two elephants, a gazelle, several sheep and a mouse or two in the room which makes rail on rail competition rather academic. As has been demonstrated over and over the main player would rather scrap or lock up old locomotives and wagons than offer them to the open market as operational resources – a form of market manipulation that benefits neither the rail industry nor the shareholders.

In bulk freight (coal and ores) rail has close to 100% of the contestable business. With the rapid growth in demand for extractive resources it is little wonder that the two major players are able to enter each other’s traditional coal markets. In effect the new entrant in each case is skimming the growth that the incumbent would have otherwise have had,

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but both are still growing their tonnages. Bulk grain is another matter – the elephants seem to have belatedly realized that they only deal in BIG and most grain operations involve aspects that rate as ‘small’. Despite this there is a somewhat sulky continuing presence in the bulk grain market that is far from the major share once enjoyed by rail

Retail freight is different. Despite notional competition on rail on the north south corridor the sum of rails share of the contestable inter-capital market is extraordinarily low. In fact if it wasn’t propped up by traffics such a frozen Tasmanian produce, new motor cars and a small number of regular industrial producers it is doubtful if rail would be doing anything useful at all on this corridor. This latter issue has been the subject of a number on my editorials so I won’t go back there for now.

Unlike their American counterparts the local major operators don’t seem to have much of a snout for customer communication or service. You only have to befriend coal producers to start to get a feeling for this – a bureaucratised and inflexible approach to customers which in the coal industry are not mild mannered small time players.

As is always the case when things don’t go as well as they might alternative business models start to emerge. In both the coal and grain industries the recent appearance of customer owned trains and in some cases locomotives is a response to the indifference of the big operators to the individual issues of the customers.

AWB has twice been a wagon owner, while they now extend to locos. GrainCorp were rather put in the position of having to get into wagon and loco ownership by Pacific National’s new found realization that it was a main line operator. CBH in Western Australia look as if they are about to enter into something similar with $175 million worth of rolling stock being part of their Watco contract.

Whitehaven and Xtrata in the Hunter Valley both have acquired new wagons and locomotives, while Centennial Coal is acquiring new wagons and it is assumed locos will follow. Other producers may well follow this lead and in every case will tend to acquire the most efficient equipment to give them an edge over the incumbent operators and their sometimes heritage equipment.

In several cases the owners of these new train sets have existing contracts with the elephants. I would expect that contract renewal time will find the big operators under all sorts of pricing pressure as a result of these customer owned trains – after all the normal ‘take it or leave it’ rules don’t apply when the ‘leave it’ option looks to be rather attractive and quite achievable. It may be in time that the elephants, with their myopic rocks and seeds mentality, will find that they retain the minor coal producers along with the seasonal fluctuations of the larger producers as their traffic base with the full time base load being hauled in customer owned trains. An interesting example of economic evolution in an imperfect system.

However the likelihood of private trains in the inter-modal freight market is rather small – individual small customers are unlikely to ever command sufficient traffic to enable them to break away from the existing operators. In fact they are far more likely to break away into truck ownership where most would already have considerable experience. For the same reason freight brokers, who are the nominal customers of inter-modal trains these days, are unlikely to go into private trains since it is all too easy to go out and hire or buy trucks.

It may be the SCT model is the direction that needs to be adopted in this market – a logistics system

with carefully thought through equipment and terminal acquisitions that give it a distinctly different and salable edge. Introduction of the first 4th generation locomotives, vans rather than containers for most of their loading, warehousing at their terminals, boxcars that are as big as any on the planet and trains maxed out on both length and tonnes allow SCT to survive (very successfully) in a market that is supposed to be the domain of the bull elephant. It is probably not a coincidence that SCT operates east-west where rail retains a very high market share, but so far has not been able to make an acceptable case to go into the north-south market. Costs and service quality issues lie at the root of this, but I would expect a quite different response should the Inland Route ever get up and running, if only because it would by-pass the worst of the service problems, all of which are centered around Sydney.

LETTERS TO THE EDITOR

Silence is not golden, people!!

COMING EVENTS

HIGH SPEED STUDY TOUR – TAIWAN, KOREA AND JAPAN.

We are approaching the 'pointy end' of business now with ticketing of air travel having to occur before the 7th March.
We have all but filled our quota of spots.

The tour starts in Taipei (around 7 May) and ends n Tokyo (22 May)

The tour will take in Taipei to Zuoying, including rolling stock depot, maintenance facility and high speed rail Operational Control Centre.

Korea Train eXpress, including Goyang KTX depot and the Korean Railway Research Institute (KRRI)
Travel from South Korea to Hakata (from South Korea to Japan by ferry)

Travel on and visit the JR Kyushu Shinkansen trains and facilities, JR Central Shinkansen trains and facilities including Shinkansen Museum, site visits of Nippon Sharyo facilities, the Railway Technical Research Institute in Tokoyo, the Shinkansen E5 Series and Sendai Rolling Stock Centre, JR Central Shinkansen Operations Centre, Shinkansen Simulator experience and JR Central Shinkasen Command Centre.

Anyone wanting to learn more about the tour can contact Andrew Honan on 0407 921 152

HUNTER VALLEY STUDY TOUR

This long awaited event is now being planned for September or October 2011 and is likely to combine a seminar and an inspection tour. Given

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the intensity of traffic on the core Hunter Valley network, primarily to do with coal, there is a lot to see and a lot more to try and comprehend to get an understanding of this network.

The proposal would be for an inspection tour and a short seminar on a Friday, inspection of the lower Hunter Rail network on the Saturday and a tour of the Ulan line to Gulgong on the Sunday.

Stay tuned for more details as the year progresses.

FEBRUARY MEETING – REPORTER: MALCOLM CLUETT

OPPORTUNITIES FOR ENHANCING THE FUTURE TRANSPORT OF THE CITY OF SYDNEY.

Garry Glazebrook, Transport Policy Manager, City of Sydney

The speaker was involved with the Sydney Morning Herald (newspaper) independent enquiry into Sydney's Transport.

He said that the planners won't get it right in greater Sydney if the transport in the City of Sydney is not done right. (For interstate readers, the City of Sydney LGA covers quite a small area compared with greater Sydney, though it has long been the focus of the train, bus, ferry and the former tram system).

Transport policy is still evolving within the City of Sydney. The **Sustainable City 2030** plan and its objectives is available of the CoS website**.** The presentation provided by Garry is a 'work in progress' and at this stage is not able to be released to our Reporter

Of all the world's cities, Sydney ranks the 75th largest on a population basis.

It ranks between number 10 and 20 on some indices, ie, quality of life, etc. However some indices are slipping due to poor public transport. Average speeds on arterial roads are falling due to traffic congestion.

The CBD currently has 73% market share by Public Transport, which is higher than other Australian cities and quite high by world standards.

1000 buses enter the CBD during the morning peak, and 6000 enter during each working day. Obviously the buses themselves are a source of traffic congestion, and contribute to noise and air pollution in the CBD streets. The speaker presented an aerial view of buses in George St, resembling ants in an ant farm, or blood cells

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proceeding down a capillary, so numerous were they.

Where will the greatest increase in demand for public transport occur ?

- North West & South West growth centres
- Green Square redevelopment area (within City of Sydney LGA)
- Rhodes Peninsula/Olympic Park redevelopment area.

The NW & SW Sectors show up in aerial mapping for car transport usage. The speaker showed slides of growth areas, centres of employment, and public transport etc.

Jobs Growth – Barrangaroo area in the western CBD will be a real challenge, as the bus corridors and CBD railway stations are currently near capacity.

The City of Sydney undertakes a regular survey of occupancy levels in each building within the CBD (including floor by floor) to provide data for planners.

Basic Transport Strategy –

- Need a proper integrated fare for all modes of public transport
- Expand the rail fleet (will be needed)
- Rationalise buses entering the CBD
- Build Inner West Light Rail
- Need another harbour crossing and heavy rail in the CBD.

  (New Harbour Crossing and North-South under-CBD line will provide capacity for 60% more trains into the CBD – enough for another 35 years of growth.)
- North West heavy rail will reduce buses coming into the CBD.
- Metros – will be held over for 20 years because other things are a higher priority.
- High Speed Rail will be needed to link with Sydney with regional and interstate areas.

High Speed Rail could avoid the need for a 2^{nd} Newcastle Freeway and a 2^{nd} Sydney airport. However there is very challenging topography for the routes in and out of Sydney.

There was discussion about whether Australia's population density could support HSR. Also the number of passengers currently using the Sydney-Melbourne and Sydney-Brisbane air corridors.

Comparisons were made with Spain, which has invested heavily in HSR in recent years, despite having an extensive existing passenger rail network. Also comparisons with North America, which despite numerous proposals has not built new High Speed Rail.

Spain has been criticised for over-investing in expensive HSR, which is contributing to that country's current debt problems.

Australian airlines do not pay taxes on aviation turbine fuel at present, which gives them an unfair advantage over other transport modes.

High Speed Rail Alignment issues

- Via CBD – closer to major population centre
- Via Parramatta – Still expensive, but with better growth prospects.

New HSR alignment into Parramatta from South and North will be expensive. High speed trains can't mix with suburban trains on an existing double track corridor. (Sydney CBD is approached from the South by a quad-track corridor, which is better, but will probably be filled up with commuter

trains in a few years anyway). The speaker claimed that the Illawarra sextuplication between Sydenham and Illawarra Junction for future HSR will be easy to implement.

The speaker claimed that the Parramatta HSR route would be as least as expensive as the Sydney CBD HSR route.

Key network enhancements.

Light Rail extensions based on the George St corridor. Buses would be rationalised and feed the LR at strategic interchanges.

The current system where buses traverse the length of the CBD before reaching their terminus should be eliminated.

Bicycle Paths and incentives are an important part of City of Sydney planning.

Brisbane and Melbourne – both are already planning new heavy rail extensions for when Federal Funds become available.

The RailCorp proposal, only recently dropped, for a Western CBD alignment with a stub terminal near Wynyard, would have been a white elephant. A terminal station has much more limited train-handling capacity than a through station, and there is a already a severe need for under-harbour rail transport.

Questions &Answers

Q Freight – future for Port Botany vs Port Kembla and Newcastle ports ?

A The mode share for rail at Port Botany should be increased.

A new passenger line to Newcastle would free up the existing line for freight between Newcastle and Sydney.

There has been very little route alignment improvements on this corridor, despite the fact that it is very busy. (Compare with the Brisbane – Rockhampton rail line, which has had extensive curve and grade easing, and major realignments).

Q Definition for HSR ?

A Need to capture business market and international tourist market. (Back packers will continue to use $20 fares on buses between cities such as Sydney - Melbourne.)

To be viable, HSR will need 350 km/h plus alignment.

Future oil prices need to be considered – when airlines stop operating due to lack of liquid fuel then a Business Case will say rail can compete at 160 km/h. But these speeds will not compete with airlines.

Maglev was favoured for HSR 20 years ago, but not now as conventional rail technology has caught up.

Q Parramatta –could it be used for Sydney’s HSR terminal ?

A Study has been done – shows the CBD route is a “no-brainer”.
Jobs – are linked to business travel, which largely originates from employers in the CBD. Domestic tourism is a minor issue.

Q Dispersed sources of business trip origin in Sydney and Melbourne. This means that there is

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no need to route the HSR line into the Sydney CBD (or Melbourne CBD).

A An improved Parramatta–City commuter line could help make the CBD HSR alignment more viable. But as mentioned earlier, business travel originates from high-end employers in the CBD, which means the City of Sydney LGA.

Q What is the current need for the Parramatta – Epping line ?

There are alignment problems at Epping Junction, where the underground platforms are aligned N-S not E-W. There is also an issue with vertical transport on the two levels of Epping station, so it is not ideal. (the stub tunnels for the Parramatta extension are already in place between Epping below ground platforms and the existing tunnel mouths – Ed)

Need a new harbour crossing anyway to go with a Parramatta – Epping – CBD railway.

Q Why aren't jobs concentrated in the growth centres – so commuters have no need to make the long trip into the CBD ?

A Top end jobs are found in the CBD, and will remain so. These sort of jobs are the ones which generate business travel.

The jobs growth in Parramatta has been mostly government instrumentalities, where politicians not management make the relocation decision. Few private sector employers are willing to move their head office to Parramatta.

Q How about a new heavy rail line to link NW & SW growth centres ?

A Would need to link these two dormitory areas with employment centres to be of most benefit. No corridor has been set aside for this route.

The speaker was thanked for an interesting speech which promoted some debate about aspects of Sydney's future transport.

A MEETING OF INTEREST

The Sydney Mechanical Chpter of IE will be hosting a presentation in the Ground Floor Auditorium, 8 Thomas St , Chatswood on Thursday 17th March on the topic of ADVANCES IN ENERGY EFFICIENT TRAINS FOR NSW. The presentation will be by Phil Pearce, GM, Professional Services, RailCorp and Guy Collishaw, Engineering and Technical Director, RailCorp for PPP project, and will be at 18.00 for an 18.30 start. RTSA members are welcome and members of IE will accrue CPD points for attendance (as with our own technical meetings)

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FUTURE MEETINGS AND EVENTS (6 MONTH HORIZON)

Date and time	Activity	Location
Wednesday 2 March 2011 11.30 for 12.00	London Crossrail Dr Mark Raiss, Head of Metros URS/Scott Wilson	Pymble Room Ground Floor 477 Pitt St Sydney
Wednesday 6 April 2011 11.30 for 12.00	Adelaide Rail Revival Stephen Townsend, DTEI (SA)	Meeting Room Central Station Concourse Sydney
Wednesday 4 May 2011 11.30 for 12.00	Making Rail the Preferred Option for Travel Nick Shorter, Human Factors specialist, Interfleet	Meeting Room Central Station Concourse Sydney
Sun 8 May to Sun 22 May 2011	High Speed Rail Study Tour	Taiwan, Korea and Japan
Wednesday 1 June 2011 11.30 for 12.00	To be confirmed	
Wednesday 6 July 2011 11.30 for 12.00	To be confirmed	
Wednesday 3 August 2011 11.30 for 12.00		

Members with ideas for meeting topics should contact the Secretary, John Watsford, in the first instance – contact details on the back page of this Newsletter

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.

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