

# SYDNEY NEWSLETTER



ENGINEERS  
AUSTRALIA

**RTSA**

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

AUGUST 2006

## NEXT RTSA SYDNEY CHAPTER MEETING

**Thursday 7<sup>th</sup> SEPTEMBER**

THIS MEETING WILL BE BACK AT THE NEW REGULAR MEETING PLACE AT CHATSWOOD -

**GROUND FLOOR AUDITORIUM, INST. OF ENGINEERS,  
8 THOMAS St, CHATSWOOD (WEST SIDE OF CHATSWOOD STATION)  
Starting at 17.30 (Networking and Nibbles) for an 18.00 Presentation**

## **MAINTENANCE OF HIGH QUALITY TRACK IN A HIGH DENSITY TRAFFIC ENVIRONMENT**

**Alan Logan, Plasser Sales and Marketing Manager for Australia, New Zealand and South East Asia, will give us a presentation on how to manage the competing demands of high quality track in high density traffic. He will broadly cover:-**

**Principles of railway track and ballast  
Importance of high quality track  
Maintaining high quality track  
Maintenance in a high density traffic environment  
Recent developments in mechanised maintenance**

*Complimentary nibbles (finger picking good!) and networking from 17.30 prior to the AGM and Presentation starting at 18.00. Meetings generally finish between 19.00 and 19.30, allowing attendees to get home at a sociable hour.*

Why not come along to an RTSA meeting (where you will be most welcome) and broaden your horizons in the industry that employs you and/or that you are keen to support. Even better consider joining RTSA (you do not have to be an engineer to be a member) and enjoy the full range of services provided by the association. Contact is at the mail address (above) or at [www.rtsa.com.au](http://www.rtsa.com.au) or by ringing Bill Laidlaw on 0409 602 833

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## THE OBSERVATION POST

Back in 1978 a Melbourne compatriot, Ian Manning, authored a book titled *The Journey to Work*. One of the propositions he developed in the book was the correlation between the average time taken between home and work and the radial size of cities. If I remember correctly Ian identified around 30 – 45 minutes between home and work as being the critical time that identifies the (realistic) outer boundaries of a city.

Back when there was little else but horses or more commonly (for the working man) walking, cities grew a kilometre or two from their centres, skewed to the extent that employment in those days would locate to where labour was available as much as people would locate to where work was. With the arrival, in the 1880's through to 1900 of horse buses and more importantly trams, the distances were able to extend out to 5 -10 km without adding anything to the time taken to get to and from work. Suburban railways, firstly with steam and most importantly with electrification allowed this to grow to around 20 km. If you need evidence have a look at the development of Sydney. The early tram routes actually extended beyond the developed suburbs into undeveloped areas, as is pictorially shown in the David Keenan series of books on the history of the tramways of Sydney. Development rapidly followed these tram routes, but even at their maximum extent they formed a tight network almost entirely within an 8 -10 km radius from the city. The few lines that extended further were the first to close since they reached beyond the logical 'time' barriers of the journey to work. From the mid 1920's the suburban railway network was electrified which took the boundaries out to around 16 – 20 km, and this is evidenced by the fact that the 'goods lines', created to relieve the passenger network of conflict with goods trains, effectively extended to Sefton, Lidcombe the Parramatta River and (by default) Hurstville only. There was no need in those days to extend further since there was little development (and few passengers) on the far ends of the then suburban network to create interference. Examination of Adelaide, where the rings of successive development are almost as clearly delineated as are growth rings in trees, will clearly point to the same drivers of development. Throughout this period, which lasted up to the 1940's, public transport was the key determinant of the size of cities. At the end of the Second World War Sydney's trams were carrying around 400 million passengers a year while the suburban railway had around 250 million, all in a city with a population below 2 million.

It was in the decade after WW II that public transport, town planning, and political wisdom all lost the plot. Explosive growth in private car numbers (the Holden syndrome) and an infatuation with roads led to rapid outward expansion of cities in line with the *apparent* longer distances able to be covered within the 'Manning Factor'. Cities now spread out radially to 50 km or more where there are no geographic constraints to expansion. Freeways have carved up the terrain and functionally separated formerly integrated communities. Work has moved completely away from locations accessible to public transport so that not only the journey to work has to be made by road, so does all the freight activity associated with those work places.

Buses these days would seem to be carrying around half the number of passengers once carried by trams while the suburban railway is handling around the same number but over a far bigger and more resource hungry network, in both cases in a city more than double the population of the 1940's

Passion for the 'quarter acre' has been encouraged against all common sense by huge hidden subsidies paid from the public purse to provide utilities and services to land that should never have been developed. Even now we have the undignified posturing of the Federal Treasurer, who in one breath quite rightly refuses to drop fuel excise in response to high oil prices, but then lambastes the states for not making more 'cheap land' available for housing. If land is in short supply then normal supply / demand pressures will dictate that it not cheap at all. Any why is land in short supply you may ask? Quite simply it is in short supply because the cities have outgrown the basic rule of the journey to work – they have moved beyond the reasonable range of a sensible home to work nexus for the majority of people.

There are a number of solutions that suggest themselves, but none are cheap and none are short term. The first and most important issue is to recognise and accept that land prices in large and growing cities will always increase faster than the underlying rate of growth. Let it be so. In time land prices at other places, where there is little or no current growth will become more attractive. With suitable well thought through policies and strategies these places will develop as an alternative which, god bless 'em, may actually lead to real regional development. But this won't happen unless there is provision for superior inter-regional transport which will allow the proper range of inter-actions between now more distant centres. Road will

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inevitably be part of this, but so should quality public transport, as should rail freight links.

Within the existing cities, there is some scope for concentrating population and development around public transport nodes – major rail stations and interchanges where mobility is simplified for a greater number of people. There is also scope for speedier services – not the XPT nonsense of a train advertised as being able to do a speed it rarely ever was allowed to achieve but rather the concept of continuous improvement for the nodal links in terms of transit speed and frequency. Newcastle for instance has much better frequency than in the 1950's but the real city to city times are no better than they were in those days. It needs a faster linking service that can show a clean pair of heels to the past, unless it is intended that Newcastle remain the last station on a long and tedious branch line. In fact one of the sleeper issues for RailCorp (for fairly obvious reasons) is reducing the typical travel times between key points on the network. Current suburban train transit times are mostly the same or slightly worse than immediately after electrification, despite the passage of 75 years and massive development of higher speed road networks. The rail network will not be able contribute much to future development of the city unless it can start to recapture the magic 'Manning Factor' in relation to the journey to work.

There are no simple answers and I would be the first to agree that the situation the rail network finds itself in is not of its own making. A long succession of politicians of limited social intelligence (but high political manipulative skills), with long term horizons stretching to sunset on a good day, and willing to do deals with their less than shiny mates have contributed an almost insuperable problem for the future. In 1959 some wise owl chalked the message "Victim of Cahill's Capers" on the back of one of the last trams on the Paddington / Bellevue Hill line. In many respects we all are.

*You may find the two following articles, about Perth and Victoria, quite enlightening. I do.*

## **FUTURE MEETINGS AND EVENTS**

A meeting program has been determined for the remainder of 2006, although always be aware that changes to topic, location or date may occur. We will always despatch a newsletter, or in extreme situations a flyer to advise of any changes to the advertised program. In most cases the next couple of months are firm.

**SEPTEMBER 7<sup>th</sup>:** See front page of this newsletter.

**OCTOBER 5<sup>th</sup>:** A surprise; but also an extraordinary General Meeting to consider and vote on the new RTSA constitution.

**NOVEMBER 2<sup>nd</sup>:** Government and Opposition transport spokespersons debate their policies ahead of the 2007 election (subject to confirmation)

**2007** will start with a meeting on **Thur 1<sup>st</sup> February**, on the topic of "Advanced Steam" by Malcolm Cluett

AusRAIL 2006 (the annual rail industry conference) will be in Brisbane between 21<sup>st</sup> and 22<sup>nd</sup> and November.

## **NEWSLETTER FORMAT**

You will notice that the front page of the newsletter has the 'Next Meeting' notice done in poster style. Where the opportunity arises consider printing off this front cover and placing on your work or other suitable notice board – more attendees at meetings means better informed people engaged in the industry.

## **MEMBERSHIP – JOIN UP A NEW MEMBER**

While this newsletter is primarily intended for members it is distributed more widely than that. Readers who are not members of RTSA should seriously consider joining the organisation. Details of membership and how to join will be found in the RTSA website at [www.rtsa.com.au](http://www.rtsa.com.au)

Although RTSA is a technical group under the auspices of Engineers Australia it is open to everyone who has a real interest in railways. It is the only technical group which covers all disciplines (civil, mechanical, electrical, signalling, communications etc.) and as such is one of the most rewarding rail technical networking groups in the country. The annual cost is very reasonable, and the rewards are considerable.

RTSA offers a number of regular activities for its members, including meetings, visits and technical tours. The every other year Conference on Railway Engineering (CORE) is a highlight. A number of awards are made annually to encourage recognition of meritorious activity in support of the rail industry. A particular RTSA attribute is that it engages in considerable well reasoned and structured lobbying in support of the rail industry with regular submissions and

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presentations to policy study groups and enquiries. Membership, in support of this activity alone, is very worthwhile. Consider joining RTSA now if you are not yet a member, or if you are a member see if you can introduce a friend as a new member. Remember [www.rtsa.com.au](http://www.rtsa.com.au)

## **NEW WORDS FOR 2006 (cont.):**

### **A new vocabulary for the workplace**

(an occasional series to keep members up to date with the wider corporate world)

**SITCOMS:** Single Income, Two Children, Oppressive Mortgage. What Yuppies get into when they have children and one of them stops working to stay home with the kids.

**STRESS PUPPY:** A person who seems to thrive on being stressed out and whiny.

**IRRITAINMENT:** Entertainment and media spectacles that are annoying but you find yourself unable to stop watching them. The J-Lo and Ben wedding (or not) was a prime example - Michael Jackson, another...

**ADMINISPHERE:** The rarefied organizational layers beginning just above the rank and file. Decisions that fall from the adminisphere are often profoundly inappropriate or irrelevant to the problems they were designed to solve.

**404:** Someone who's clueless - from the World Wide Web error Message "404 Not Found," meaning that the requested site could not be located.

**GENERICA:** Features of the American landscape that are exactly the same no matter where one is, such as fast food joints, strip malls, and subdivisions.

## **A FUTURE FOR ADELAIDE'S URBAN RAIL SYSTEM**

*This article was written by Stephen Townsend, editor of the SA RTSA newsletter, for their September edition. Stephen recently escorted a number of Adelaide people on a study tour to Perth to look at the extraordinary urban rail developments there and to ponder on what a similar political attitude might mean for South Australia. Everyone knows that Sydney is different to Adelaide is different to Perth – but is it? In regard to serious urban rail development appropriate to the 21<sup>st</sup> century Perth is a model that has a lot to show every other city in this*

*part of the world (and many other parts as well). So, although Stephen's article was focused on one state, the potential lessons are equally or more applicable here in Sydney.*

Aldinga to Adelaide in 40 minutes, Noarlunga to Adelaide in 30, Gawler to Adelaide in 40 minutes, Nuriootpa to Adelaide in 75 minutes and a train every 15 minutes - A figment of imagination? Not if we could apply to Adelaide's rail system the lessons from Perth's suburban system's development.

Over approximately the past 15 years, Perth has rebuilt its suburban rail system from one facing closure into one of the best in Australia and certainly one very extensively used. During a visit to Perth some years ago I was amazed at the number of people using the system. Arriving in Perth on a Sunday and with time to spare I went to Perth station to observe the activity. Train services appeared to be provided on 20-minute service intervals and the trains, which were mainly two car sets, appeared to be at least half full.

This was not always the case. When I first went to Perth in the early 1980's, the situation was quite different. The Fremantle line had been closed in 1979. The remaining lines to Midland and Armadale were diesel powered using a mixture of railcars and locomotive hauled wooden bodied carriages. Patronage on these lines was falling and costs were rising. The closure of the Fremantle line was an attempt by the government of the day to reduce costs under the perception that suburban railways were no longer viable.

The Fremantle line closure provided some good lessons. Investigations and studies by the government prior to the closure suggested that, with the closure of the Fremantle line and the substitution of train services by buses, the patronage on the Fremantle route would increase. In fact, with the closure of the line, patronage dropped immediately by approximately 30% and remained that way while the line remained closed. Luckily, the line was retained for freight services, so that the reinstatement of passenger services in 1983 with a change in government was easily achieved. The interesting result of the reinstatement of train services was that overnight the patronage on the Fremantle route returned to pre-closure levels. The two main lessons from this experience are that firstly, people prefer rail based public transport and secondly that government policies favoring rail-based transport win elections.

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The lessons of the Fremantle closure were not lost on any of the subsequent WA Governments. In 1988, after 5 years of evaluation, the decision to electrify the suburban rail system was announced. Electric operations started in 1991.

In 1990, the decision to build the Northern Suburbs Line to Joondalup was announced. This line was opened in 1992 and patronage on the line has exceeded all predictions. This line has since been extended twice, firstly to Currambine and latterly to Clarkson.

The Mandurah Line to the south of Perth was announced in 2003, is currently being built with its opening is planned for the end of 2007.

The reasons for the success of the Northern Suburbs Line and indeed the significant increase in patronage of the older lines since electrification are:

- i) The ability of the electrified system to provide a high average speed. The high power of electric trains allows the trains to accelerate faster and thereby reduce travel times. On the Northern Suburbs Line, stations were spaced further apart at approximately 3 km intervals, reducing the number of stops and allowing both a higher top speed and a high average speed of between 65 km/hr and 70 km/hr depending on whether it is a stopping or express service. The result is a journey time from origin to destination that for many people is either quicker and / or less costly overall when the train is used compared to driving directly.
- ii) The low maintenance and high availability of electric trains allows a more frequent service. This reduces passenger wait times at stations and has a significant effect on the ability of the railway to compete on journey times.
- iii) The cost of operating electric rail cars is significantly less than that for diesel-powered railcars. As an example, the total cost per km of maintaining a Perth electric railcar is approximately half that of TransAdelaide's diesel powered cars.
- iv) The higher average speed and high availability of electric railcars means that less railcars are required to carry the same number of passengers than when compared with a diesel rail system. For example compared to Adelaide, the Perth

rail system carries significantly higher numbers of passengers per day with less rail cars.

- v) The rail lines are designed as an integral link in the transport chain. Stations are provided with extensive car parking facilities, bus interchange facilities with the bus stops being positioned either beside or over the platforms and kiss and ride drop off points. The importance of car parking should not be underestimated as Perth's experience has shown that car parking is the most important factor in attracting riders and is the major limitation on total riders using the system.
- vi) Both the Northern Suburbs Line and the Mandurah Line are being used as a developmental catalyst. The two extensions of the Northern Suburbs Line have been into relatively undeveloped areas, which now, as a result of the railway, are being rapidly developed as Perth's urban areas expand. The Mandurah line will serve the rapidly developing coastal areas to the south of Perth.

It should be noted that the development of the transport system in Perth is not totally rail based. During the 1970's and 1980's and indeed continuing up to the present day, there has been heavy expenditure on roads. Perth has a highly developed network of freeways and multi-lane highways that extend over most of the Perth metropolitan area. This road network has been highly successful in generating additional traffic such that in peak hours they become heavily congested and journey times significantly increased. In the 1980's, the response was to redevelop the roads to add additional lanes and therefore capacity. This writer can remember the Mitchell Freeway being rebuilt during this period as it was reconfigured to accept the additional lanes within the confines of the corridor.

By the mid-1980's, Perth's transport planners realized that continually widening the freeways and major roads would not meet the future transport needs and it was as a result of this that the Northern Suburbs Railway and subsequently the Mandurah Railway were conceived. They were not built to supersede road traffic but to supplement it. They provide additional capacity by taking unnecessary road journeys off the roads. It is estimated that at present the railway capacity is equivalent to approximately three or four lanes of road traffic but taking up significantly less width along the corridors.

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The Perth experience is directly relevant to Adelaide. Adelaide's rail system is much where Perth's system was in the 1980's. However, Adelaide's road system is quite different.

Adelaide does not have the inner city connecting freeways nor has set aside corridors for new freeways or major highways that would easily allow it to develop a road system such as that developed in Perth. At present the approach is to redevelop existing major roads such as South Road. The redevelopment includes the construction of tunnels at major intersections to provide grade separation. This will be a slow, laborious and expensive task that during the various constructions will create extensive disruption and congestion for road traffic over a long period of time, possibly decades. It is a mute question as to whether the timetable for the reconstruction of these roads will meet the projected growth in road traffic. It is suggested that, as in Perth, by upgrading the rail system and providing a viable alternative that will remove unnecessary road journeys, will relief be provided for these roads.

If Adelaide's rail system is to be brought up to a similar standard and meet the demands of the next 50 years, then based on the Perth experience, the following changes are suggested:

- i) An upgrade of the existing track to provide higher speeds, increased reliability and reduced maintenance costs.
- ii) Electrification to provide increased acceleration, higher speeds, a reduced journey time, increased availability and reduced operating costs. It will also reduce the reliance on diesel fuel, which is significant in these times of high and increasingly higher fuel prices.
- iii) The selection and upgrading of specific stations to provide significantly increased car parking, improved bus interchange and kiss and ride facilities. The lack of space at most Adelaide railway stations may require the construction of multi-story car parking facilities.
- iv) Extension of the existing rail network to serve the rapidly growing urban areas south of Noarlunga to Aldinga and in the Barossa Valley between Gawler and Nuriootpa.

Can Aldinga to Adelaide in 40 minutes, or Nuriootpa to Adelaide in 75 minutes become reality? Can the Adelaide rail system be redeveloped to become the

backbone of the Adelaide public transport system and upon which much of the future development of Adelaide is based? To both questions the answer, based upon the experience in Perth, is clearly yes.

It won't be easy. South Australia does not have the huge budget surplus based upon mining revenues that WA has. But money is not the primary requirement. The primary requirement is the will to develop a balanced transport system that will serve the future development and prosperity of Adelaide. If the will is there, a way can be found. The Governments of WA found the will. Time will tell if the Government of SA can demonstrate a similar will.

## **THE VICTORIAN REGIONAL FAST TRAIN TIMETABLE**

*Geoff Mann is a long time observer of the rail scene in Victoria and he has a particular interest in the development of timetables and services over the years. This article is a preliminary summary by Geoff of the significantly enhanced train service due to start on September 3<sup>rd</sup>. As with the preceding article there is an argument that Sydney is different, and it certainly is in the detail. But maybe a case can be made that it is not all that different in principle, in which case the following should be of more than passing interest. After all if the natives of Ballarat can get to 'Town' in a bit over 60 minutes why wouldn't the inhabitants of Minnamurra, Yerrinbool, Medlow Bath or Wye be similarly interested? It will be worthwhile keeping an eye on the impact of RFT on the economic health of Victorian towns that are now realistically within commuting distance from Melbourne despite being up to 125 km away. The original (unedited) version of this article appeared in a recent edition of the Australian Association of Timetable Collectors (AATTC) magazine 'Table Talk'.*

The long awaited "Regional Fast Rail" services are due to commence on 3<sup>rd</sup> September for all lines except for Gippsland which be in October following test runs after upgrading works. Lines involved are those from Melbourne to Geelong (73 km), Ballarat (was 119 km now 114 km), Bendigo (162 km) and Traralgon (158 km). Although the Seymour/North East lines were not part of the upgrading, the region has received considerably expanded services. The Seymour weekend services will not commence until late 2007 when the Craigieburn electrification is completed.

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Overall there is a large increase in the number of services particularly in the evenings and weekends. It is pleasing to see that considerable effort has gone into the provision of more regular frequencies and 'memory' times where possible. The implementation of regular patterns has resulted in an increase in stops and a general slowing of long distance services (see below). The medium distance services offer near regular hourly frequencies on all lines, generally in a stopping all stations alternating with semi-express pattern. Selected stations (Garfield, Drouin and Gisborne) are now served by all trains except 'flagship' express services in some cases.

Running times have been generally standardised for the differing train types although some anomalies exist. Whilst Sprinters and VLocities have been given the same running times on the Seymour and Gippsland services, they vary on the Ballarat, Geelong and Bendigo lines, with Sprinters being allocated slower schedules.

The promised fast trains have been provided with each of the four upgraded lines gaining one train in each direction on weekdays which meet the Government's target times (denoted as Flagship services), although the Gippsland service was amended to meet community wishes and has additional stops.

All long distance services remain as loco-hauled although Sale receives a VLocity service on Sundays.

Crossing of trains on the single line sections appear to take place at some hitherto unusual locations, e.g. Morwell. The singling of the Bendigo line beyond Kyneton has resulted in some Down trains having to await Up trains at Kyneton and Castlemaine in addition to slowing for crosses en route. Simultaneous departure times for some Up and Down trains at Castlemaine will require sharp timekeeping, as will some locations (e.g. Geelong) on other lines.

The only overtaking move noted takes place on the Geelong line where the 0704 departure from North Geelong (VLocity express) overtakes the 0701 (loco-hauled 'stopper') further along the line (possibly near Corio?).

Comparisons with previous timetables have been used to illustrate the changes brought about by the RFR project. Temporary timetables applying over various periods have generally been excluded.

## Journey Times:

### 1. Long Distance Services:

Journey times for trains to and from Warrnambool, Swan Hill, Albury, Shepparton and Bairnsdale are generally little changed under the new timetable as they continue to be loco-hauled and are thus unable to utilize increased track speeds. An increase in the number of stops has also affected overall times. The elimination of Winchelsea as a crossing station for Warrnambool trains has been negated by additional stops. Certain Albury line trains are now to cross at Riggs Creek loop in lieu of Seymour and are consequently slowed. All Shepparton trains now stop at a number of locations between Southern Cross and Seymour. Most Sunday services on the Bairnsdale line benefit from semi-express running.

2. Medium Distance Services: (Flagship services have been excluded from statistical analysis).

**Ballarat:** This is the line that has benefited most from the project, due particularly to re-alignment. Almost all services are operated by VLocities (there is one Sprinter in each direction on weekdays) and reductions in journey times (average of 10 minutes on weekdays) are substantial despite an increase in the number of stops (up from an average of 4.4 to 6.7) and generally poor suburban paths.

**Bendigo:** The increase in the average number of stops has offset possible gains from higher speeds and there is only a few minutes reduction in average journey times. Between Sunbury and Kyneton, only one track (the West line) will be available for 160 km/h. It is interesting to note that some Sunbury locals are operated by VLocity units.

**Geelong:** The proportion of stopping trains compared with semi-expresses has generally increased. Of 11 Down semi-express services on weekdays, 7 are loco-hauled and unable to benefit from high speed running. However, the four that are rostered for VLocity operation are given timings close to the flagship service (eg., 1100 and 1640 Down - 46 and 47 minutes for 73 km).

**Traralgon:** Only two of the semi-express services are VLocity operated. This, together with the Garfield stop,

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restricts high speed timings and results in minimal average savings in journey times.

**Seymour:** Peak hour services remain loco-hauled and thus running times are generally unchanged.

## Frequencies:

Selected main stations showing increase in frequencies (including coach services): (note Melton receives a slight reduction in services due to the abolition of off-peak Melton locals).

	Mon - Fri	Sat	Sun
Sunbury	21 → 24	9 → 15	8 → 12
Castlemaine	13 → 19	7 → 15	6 → 12
Bendigo	13 → 19	7 → 15	6 → 12
Melton	23 → 22	8 → 14	6 → 12
Bacchus Marsh	18 → 23	8 → 14	6 → 12
Ballarat	13 → 18	8 → 14	7 → 13
Warragul	14 → 18	7 → 12	4 → 9
Moe, Morwell, Traralgon	13 → 18	6 → 12	4 → 9
Lara	22 → 26	16 → 19	10 → 15
Geelong	26 → 28	19 → 20	11 → 15
Seymour	14 → 20	8 → 15	7 → 13

The top eight stations with the greatest increase in frequencies (highest number of services each way) are:

	Mon-Fri	Saturday	Sundays
Malmsbury	3 → 11	2 → 10	2 → 8
Clarkefield	6 → 14	3 → 10	0 → 8
Marshall	5 → 13	3 → 11	1 → 10
Wandong	9 → 17	4 → 12	2 → 10
Garfield	10 → 17	5 → 12	3 → 9
Wallan	10 → 17	4 → 12	2 → 10
Kilmore East	10 → 17	4 → 12	4 → 10
Rockbank	9 → 15	3 → 9	0 → 8

Two country towns which benefit from the new stopping patterns are Avenel and Birregurra, which formerly had one stopping train each way, now all three daily trains each way stop.

## Speeds

The table below lists the best high speed timings (> 115 km/h – higher start to start speeds that the maximum speed of loco hauled trains) over various sections of the upgraded lines.

There are two up Bendigo VLocity runs (1840 Sat and 1540 Sun) which over short distances are timed at an average of 140 km/h. However the impact of rounding with small numbers makes the speed calculation unreliable, so these have been disregarded in the table.

Section	Dist / Time (km / mins)	Avg Start to Start Speed
<b>Best VLocity (max 160 km/h) Times</b>		
Ballarat – Ballan	34 / 16	128 km/h
Warragul - Moe	30 / 14	128 km/h
Sunshine – Melton	25 / 12	125 km/h
Kyneton – Castlemaine	33 / 16	124 km/h
Bendigo – Castlemaine	37 / 18	123 km/h
Nth Melb – Castlemaine	124 / 61	122 km/h
Footscray - Lara	51.5 / 26	119 km/h
Sunshine – Ballan	67.5 / 35	116 km/h
Ballarat – Nth Melb	112.5 / 58	116 km/h
<b>Best loco Hauled Times</b>		
B'dmeadows – Seymour & vv	82 / 49	100 km/h

## SUMMARY:

Of the 81 daily weekday departures of medium and long distance services from Southern Cross on the four upgraded lines, only four achieve the journey times publicized so heavily in media announcements. Whilst this was not unexpected, the counterpoint is the significant improvement in frequency of trains, and compared to times as recently as 25 years ago the reduced travel times now prevailing.

Of the 81 departures each weekday, 52 are VLocity operated, although most stop too frequently for high speed timings. Sprinters, restricted to 130 km/h are scheduled on 10 services whilst loco-hauled trains (19) comprise nearly 25%. These have a maximum allowed speed of 115 km/h and cannot utilize any high speed

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sections. Any difficulties in timetable adherence due to only one track of former double lines being fully upgraded (and consequent need to operate as two single lines with crossovers) will only become apparent when the new timetable commences.

## THE ORIGIN OF THE INTERNET

In ancient Israel, it came to pass that a trader by the name of Abraham Com did take unto himself a young wife by the name of Dot. And Dot Com was a comely woman, broad of shoulder and long of leg. Indeed, she was named Amazon Dot Com. And she said unto Abraham, her husband, "Why dost thou travel far from town to town with thy goods, when thou canst trade without ever leaving thy tent?"

And Abraham did look at her as though she were several saddle bags short of a camel load, but simply said, "How, dear?" And Dot replied, "I will place drums in all the towns, and drums in between, to send messages saying what you have for sale, and they will reply telling you which hath the best price. And the sale can be made on the drums, and the goods can be delivered by Uriah's Pony Service (UPS)."

Abraham thought long and decided he would let Dot have her way with the drums. And the drums rang out and were a wondrous happening. Abraham sold all the goods he had at the top price, without ever moving from his tent.

But this success did arouse envy. A man named Maccabia did secrete himself inside Abraham's drum and was accused of insider trading. And the young man did take to Dot Com's trading as doth the greedy horsefly take to camel dung. He was called a Nomadic Ecclesiastical Rich Dominant Siderite, or NERDS for short.

And lo, the land was so feverish with joy at the new riches and the deafening sound of drums, that no one noticed that the real riches were going to the drum maker, one Brother William of Gates, who bought up every drum company in the land. And indeed did insist on making drums that would work only with Brother Gates' drumheads and drumsticks. And Dot did say, "Oh, Abraham, what we have started is being taken over by others."

And as Abraham looked out over the Bay of Ezekiel, or as it came to be known "eBay" he said, "We need a name that reflects what we are." And Dot replied, "Young Ambitious Hebrew Owner Operators". "YAHOO," said Abraham.

And that is how it all began.

# SYDNEY NEWSLETTER



ENGINEERS  
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**RTSA**

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

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

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