



The Times

February 2006

A journal of transport timetable history and analysis

Possessed by Devils



Inside: When the creepy-crawlies come out
Timetable for a new railway
Western Road buses revisited
China Rail Timetable

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The Times

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On the front cover

Do you hear noises in the night? Perhaps it's the Stomper and Shaker, stomping and shaking its way up the North Shore line, as hard-hatted and fluoro-vested track workers possess our railway lines while we're asleep. And sometimes while we're conscious too. In this issue, we present a thumbnail sketch of a major transport industry in Sydney railway- Track Possession, which produce a prodigious amount of timetable-related material on paper and in electronic form.

In this issue, we have a letter and an article on modern timetabling from Geoff Mann, a current member of our Committee and Assistant Editor of Table Talk. We welcome Geoff to both publications and foreshadow that he has more articles up his sleeve. Geoff is going to do for Melbourne what Jim O'Neill has been doing for Sydney over the past few years— systematically review the private bus routes of his home town and suburbs.

Contributors Geoff Lambert, Victor Isaacs, Robert Henderson, Geoff Mann, Ian Hammond. Ross Willson
The Times welcomes articles and letters Send paper manuscripts or word-processor files on disk or via e-mail to the editor at the address below. Illustrations should be submitted as clean sharp photocopies on white paper or scanned GIF or TIF format images with at least 300 dpi resolution on disk or via e-mail.

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The Times on-line AATTC's home page: <http://www.aattc.org.au> has colour PDF versions of The Times

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Possessed by devils: how the creepy-crawlies take over the tracks at night

Possession is nine-tenths of the law... and nine-tenths of the work of timetabling staff of NSW RailCorp. GEOFF LAMBERT lifts the veil on one of the most irksome features of Sydney train travel.

In 2005, NSW Rail Corp produced over 2,300 Special Train Notices, of which more than 2,100 were concerned with “Possessions”—over 30,000 pages of them, a number to make Linda Blair quake in her boots. Not only that, but the system produced in addition some 200 special replacement bus working timetables, 52 Trackwork Reference Guides, thousands of handbills and posters, dozens of PTT booklets and flyers, a dozen 200-page Possession Reports, a complex set of Possession Configuration Maps, numerous Excel and PDF possession planning documents and numerous full-colour staff guides. The Train Planning Business Unit is chiefly responsible for the production of all of this material.

Possession has become a full-time industry, which sees some 90% of staff time and resources in *Train Planning* devoted to planning for them. There is always a possession in progress somewhere. Passengers arriving at stations are confronted with a bewildering number of poster notices informing them of what today’s possessions mean for them— increased travel times mostly, and annoying mode transfers.

What is a ‘*Possession*’ anyway? Possessions have always been with us and have always caused trouble. A result of his involvement in a train wreck caused by the disruption of a track possession on 9th June 1865, Charles Dickens became a nervous wreck and died on the fifth anniversary the accident.

It was not always this bad. The attitude of authorities for the first 150 years of railways was to limit possessions in time and space and to maintain the train services around them. In the late twentieth century, an opinion began to form that this entailed too great a concession to the customers at the expense of the time and effort needed to do the work. Gradually, administrators phased out partial possessions, in favour of full-scale operations, where possession was complete, all trains came to a halt and passengers were shooed away to alternative means of transport.

In NSW, Possession are planned a year or more in advance and become the subject of a complex planning process. This is only partly composed of the timetable planning matters which can be found in those 30,000 pages of STNs. However, an entire

section of the organisation is devoted to possession STNs and NSW RIC called for outside tenders a couple of years ago for provision of complex STN planning software— centred almost exclusively on planning for possessions (*The Times*, September 2003).

Planning starts with a series of rolling conferences in which the works program for two years ahead begins to be thrashed out. At these meetings, which seem to happen every two to three months, planners have in front of them a colourful *Possession Configuration Map* (our page 4). This one is a Master map, showing in lurid colour-coded detail the whole of the electrified system. Woe betide the careless engineers who leave a coffee-cup ring on this piece of art. There are also individual maps for each sub-section of the system. These sub-sections—there are 16 of them—generally coincide with the subdivision of the system as found in timetables, but oriented more towards engineering constraints. In general, any particular Possession seems to be confined to one of these Configurations.

With these maps in front of them, planners then produce a rolling plan of Possessions and Close downs for the next 24 months or so. This long term plan is condensed into 12-month, Financial Year-based *Proposed Possession Programs*, in the form of Excel spreadsheets, a typical example of which is shown on our page 5. These are a work of some considerable art, in which a year’s activity is squeezed into a single “Worksheet”- time across the top, Configuration Area down the side. Notations or “fly-outs” draw attention to special features and changes since the previous edition. These Plans are constantly updated—as of the date of writing the plan for 2005-2006 had reached Version 27 that for 2006-2007 was already up to Version 8. There is also a related spreadsheet, the *Major Closures and Weekend Possessions Programme*, but it is unclear whether this is just another name for a *Proposed Possession Program*

In association with this single-page master plan, there is also a multi-page *Complete Track Possession Program*, which spells out every possession on a week-by-week basis and cross-indexes them to other events of relevance to train running, such a

Special Events STNs. A page for late June 2007 appears at the top of our page 9.

For each planning meeting, the Business Unit produces up to 6 comprehensive *Possession Reports*. These reports, each of which details a month of activity, run from the month following the meeting to the month six months thence. These are huge documents, typically 100-120 pages of small print in which all of the implications of possessions are detailed on a day-by-day basis. The two pages of details for Friday 6th January 2006, as contained in the Possession Report on the agenda for the December 2005 meeting, appear on our page 6. These reports can exist in more than one version, as times roll by.

Next comes the *Special Train Notice* proper. For a big Possession (often called a *Closedown*), these can run to hundreds of pages and are often complete system Working Time Tables. A sample, showing a page from a typical STN, showing the times of trains passing through Circular Quay is shown on our page 7. Possession STNs can be a short as 1 page.

Page 8 of this issue shows an extract from a *Trackwork Reference Guide*. These are staff guides explaining the features of particular large possessions and giving guidance on how to further explain what is happening to the customers. These Guides generally cover a 1 week period and appear one to two weeks in advance of the Possession.

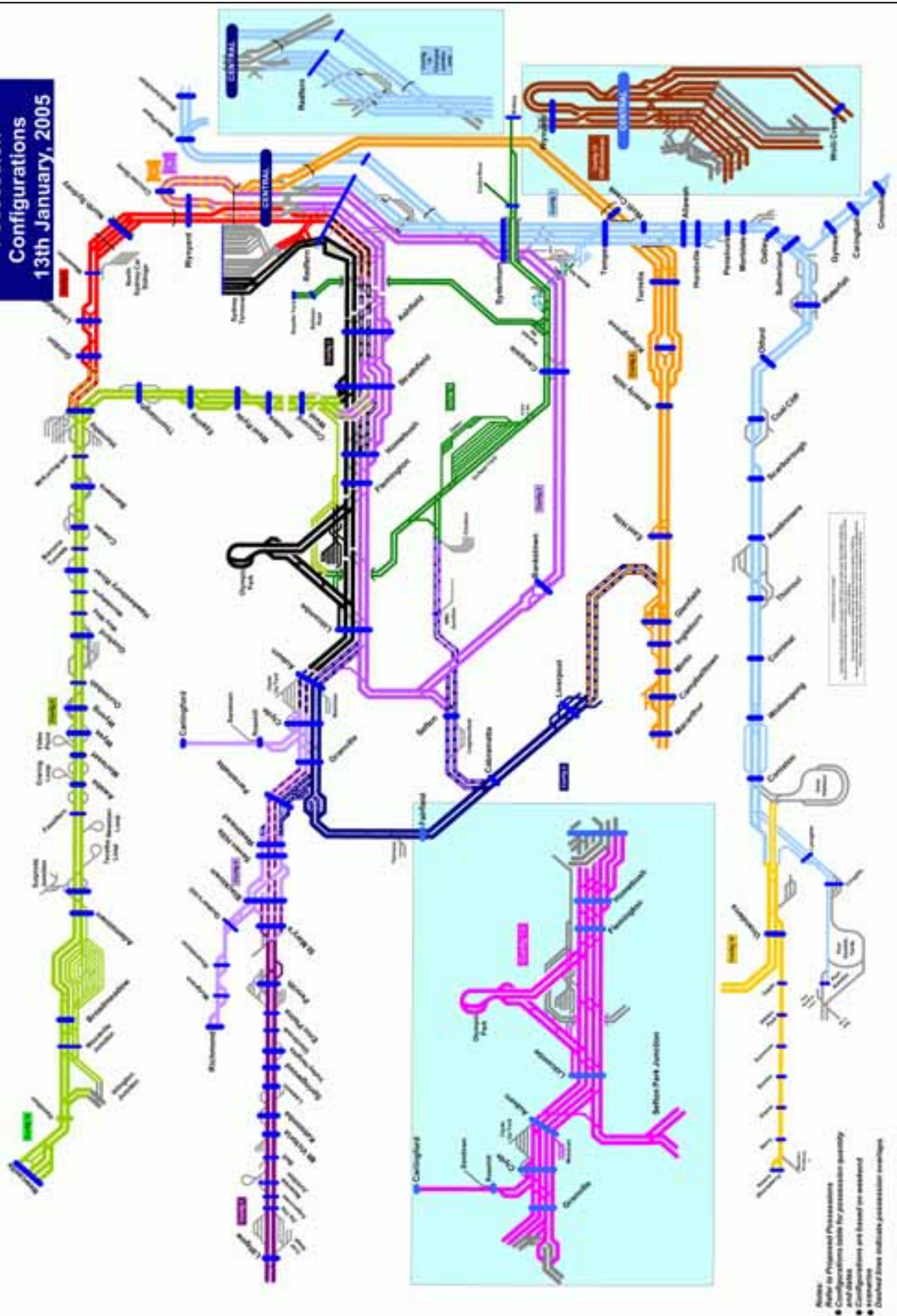
Then we have *Replacement Bus Timetables*, produced on a weekly basis and covering buses that replace trains on particular lines. An example of one of these timetables, which are usually not revealed to the passengers, is in the middle of our page 9.

Big and extended Possessions are usually accompanied by comprehensive *Public Timetable Booklets*, which we are unable to illustrate here. In addition— and also unillustrated— are the extensive wall sheet and free-standing notices. These are contracted out to an outside job printer.

Finally there are public *Brochures*, produced in a variety of styles and sizes. A sample page from a recent one appears at the bottom of our page 9 and on the cover.

Is it any wonder that the passengers’ heads spin?

**Possession
Configurations
13th January, 2005**



Date: Friday 06 January 06

Week: 27/28

December

Meeting

| | | | | | |
|---------------------|-------------------------------------|---------------------|----------------------------|---|-----------------------|
| SE001085 | Parke's Elvis Festival | | 20,000 over 3 days | Special Event | Jeffrey Campbell |
| Acknowledged | | 00:00 Fri 06 Jan 06 | 00:00 Sun 08 Jan 06 | | |
| Trn Pln Aff | | | Parke's, NSW | | |
| | Thank you very much. | | | | |
| TP011772 | Unanderra - Nowra Bomaderry (C) | | | Hi Rail Track Inspection | Robert Cunnean |
| Approved | | 08:30 Fri 06 Jan 06 | 10:30 Fri 06 Jan 06 | Continuous | 2:00 |
| | No | No | Hi Rail Track Inspection | | |
| 1 | Main Line | Yes | No | Unanderra | Nowra Bomaderry |
| ST003852 | Sydney - Parkes - Sydney | | | Special Passenger Train | Darrin Patterson |
| Approved | | 08:55 Fri 06 Jan 06 | 21:30 Sun 08 Jan 06 | | |
| | | Elvis Express | | | |
| 1 | Three (3) car Xplorer passenger | Sydney | 06 Jan 06 | 0855 | Parkes 06 Jan 06 1500 |
| 2 | Passenger | Parkes | 08 Jan 06 | 1450 | Sydney 08 Jan 06 2130 |
| | Burt, Marcus | | | | |
| TP011379 | Beverly Hills - Turrella (C) | | | Track Inspection | Fred Kourouche |
| Approved | | 09:30 Fri 06 Jan 06 | 13:30 Fri 06 Jan 06 | Continuous | 4:00 |
| | Yes | Yes | No | No | Track Inspection |
| 2 | Up Main | No | No | Beverly Hills | Turrella |
| | | | | No. 512 crossover | No. 502 crossover |
| | | | | COM Approval for Clash with TP009906 June NPAAM | |
| SE001043 | Football - Sydney Vs Newcastle Jets | | 8,000 TBC | Special Event | Jeffrey Campbell |
| Acknowledged | | 20:00 Fri 06 Jan 06 | 21:30 Fri 06 Jan 06 | | |
| | | | Aussie Stadium, Moore Park | | |

Thursday November 24 2005 13:40 PM

Page 18 of 87

PASSENGER SERVICES



Date: Friday 06 January 06

Week: 27/28

December

Meeting

| | | | | | |
|-----------------|--|---------------------|-----------------------------|----------------------------|------------------|
| TP012813 | Riverstone - Richmond (D) | | | WEEKEND | Robert Nelson |
| Approved | | 22:00 Fri 06 Jan 06 | 04:00 Mon 09 Jan 06 | Daily 07/01/06 | 2 |
| | Yes | No | Millennium / Oscar / Hunter | | 6:00 |
| 1 | Main Line | No | No | Riverstone | No. 42 crossover |
| 2 | No.2 Platform Road | No | No | Richmond | No. 22 crossover |
| | 1 x 4 Car OSCAR loco hauled Eveleigh to worksite and return. | | | | |
| TP010442 | Clyde - Granville - St Marys (C) | | | Engineering Rollingstock 1 | John Casey |
| Approved | | 22:00 Fri 06 Jan 06 | 04:00 Sat 07 Jan 06 | Continuous | 6:00 |
| | No | No | Speno 1 | | |
| 1 | Down Main | Yes | No | Clyde | Granville |
| 2 | Down West Suburban | Yes | No | Granville | Harris Park |
| 3 | Down Suburban | Yes | No | Harris Park | St Marys |
| | Run No M1 | | | | |
| TP010443 | Gosford - Wyong (C) | | | Engineering Rollingstock 1 | John Casey |
| Approved | | 22:00 Fri 06 Jan 06 | 04:00 Sat 07 Jan 06 | Continuous | 6:00 |
| | No | No | Speno 2 | | |
| 1 | Down Main | Yes | No | Gosford | Wyong |
| | Run No M26 | | | | |

ALTERED TRAIN BALANCE CIRCULAR QUAY

| NAME | DAYS | SET | ARRIVE | DEPART | SET | DAYS | NAME |
|------|----------|-----|--------|--------|-----|----------|------|
| 39-A | | 8M | 0449 | 0449 | 8M | | 720B |
| 36-A | | 8T | 0459 | 0459 | 8T | | 36-B |
| 717A | | 8M | 0514 | 0514 | 8M | | 717B |
| 10XA | | 8T | 0527 | 0527 | 8T | | 710B |
| 50-A | | 8S | 0530 | 0530 | 8S | | 50XB |
| 11XA | | 8T | 0545 | 0545 | 8T | | 711B |
| 712A | | 8M | 0559 | 0559 | 8M | | 12XB |
| 30XA | Sat Only | 8M | 0615 | 0615 | 8M | Sat Only | 30-B |
| 30XA | Sun Only | 8T | 0615 | 0615 | 8T | Sun Only | 30-B |
| 714A | | 8M | 0629 | 0629 | 8M | | 14XB |
| 36XC | | 8S | 0645 | 0645 | 8S | | 36-D |
| 47-C | | 8T | 0659 | 0659 | 8T | | 47XD |
| 50XC | | 8M | 0715 | 0715 | 8M | | 50-D |
| 48-B | | 8S | 0729 | 0729 | 8S | | 48XC |
| 12XC | | 8M | 0745 | 0745 | 8M | | 712D |
| 720C | | 8M | 0759 | 0759 | 8M | | 20XD |
| 14XC | | 8T | 0815 | 0815 | 8T | | 714D |
| 710C | | 8T | 0829 | 0829 | 8T | | 10XD |
| 47XE | | 8S | 0845 | 0845 | 8S | | 47-F |
| 711C | | 8T | 0859 | 0859 | 8T | | 11XD |
| 48XD | | 8M | 0915 | 0915 | 8M | | 48-E |
| 30-C | Sat Only | 8M | 0929 | 0929 | 8M | Sat Only | 30XD |
| 30-C | Sun Only | 8T | 0929 | 0929 | 8T | Sun Only | 30XD |
| 20XE | | 8T | 0945 | 0945 | 8T | | 720F |
| 36-E | | 8S | 0959 | 0959 | 8S | | 36XF |
| 10XE | | 8T | 1015 | 1015 | 8T | | 710F |
| 50-E | | 8M | 1029 | 1029 | 8M | | 50XF |
| 11XE | Sat Only | 8M | 1045 | 1045 | 8M | Sat Only | 711F |
| 11XE | Sun Only | 8T | 1045 | 1045 | 8T | Sun Only | 711F |
| 712E | | 8M | 1059 | 1059 | 8M | | 12XF |
| 30XE | | 8S | 1115 | 1115 | 8S | | 30-F |
| 714E | | 8T | 1129 | 1129 | 8T | | 14XF |
| 36XG | | 8M | 1145 | 1145 | 8M | | 36-H |
| 47-G | | 8S | 1159 | 1159 | 8S | | 47XH |
| 50XG | | 8M | 1215 | 1215 | 8M | | 50-H |
| 48-F | | 8M | 1229 | 1229 | 8M | | 48XG |
| 12XG | | 8T | 1245 | 1245 | 8T | | 712H |
| 720G | | 8T | 1259 | 1259 | 8T | | 20XH |
| 14XG | | 8S | 1315 | 1315 | 8S | | 714H |
| 710G | | 8T | 1329 | 1329 | 8T | | 10XH |
| 47XJ | | 8M | 1345 | 1345 | 8M | | 47-K |
| 711G | Sat Only | 8M | 1359 | 1359 | 8M | Sat Only | 11XH |
| 711G | Sun Only | 8T | 1359 | 1359 | 8T | Sun Only | 11XH |
| 48XH | | 8T | 1415 | 1415 | 8T | | 48-J |
| 30-G | | 8S | 1429 | 1429 | 8S | | 30XH |
| 20XJ | | 8T | 1445 | 1445 | 8T | | 720K |
| 36-J | | 8M | 1459 | 1459 | 8M | | 36XK |
| 10XJ | Sat Only | 8M | 1515 | 1515 | 8M | Sat Only | 710K |
| 10XJ | Sun Only | 8T | 1515 | 1515 | 8T | Sun Only | 710K |
| 50-J | | 8M | 1529 | 1529 | 8M | | 50XK |
| 11XJ | | 8S | 1545 | 1545 | 8S | | 711K |
| 712J | | 8T | 1559 | 1559 | 8T | | 12XK |
| 30XJ | | 8M | 1615 | 1615 | 8M | | 30-K |
| 714J | | 8S | 1629 | 1629 | 8S | | 14XK |

TRACKWORK

ALTERNATIVE TRANSPORT ARRANGEMENTS

Monday 23 January until Sunday 29 January 2006

City Circle Services

Monday 23 January until Wednesday 25 January

Nightly from 9.30pm until 1.30am

Work: Central – Circular Quay – Flying Junctions

Reference: STN 0030

- City Circle trains will operate in one direction only. Trains will operate from Central via Town Hall.
- Some trains from City Circle stations to the Inner West, Airport & East Hills and South Lines will operate to an amended timetable and depart from different platforms.
- Customers may need to change trains at Central to complete their journey.
- Please arrive **15 minutes earlier** than the normal departure time.

Home

South Coast Line

Tuesday 24 January, Wednesday 25 January and Friday 27 January

Daily from 9.00am until 2.00pm

Work: Helensburgh - Austinmer

Reference: STN 0028, 0035, 0039

- Some South Coast Line services may arrive and depart from different platforms due to trackwork between Helensburgh and Austinmer.
- Please listen for announcements and check station indicators.

Home

Bankstown Line

2.00am Monday 23 January until 2.00am Thursday 26 January

Work: Lidcombe – Sefton Park Junction – Cabramatta - Bankstown

Customer Brochure

Reference: STN 0002

- Buses will replace trains between Bankstown and Lidcombe via Regents Park and also between Bankstown and Cabramatta.
- A regular train service will continue to operate between Bankstown and the City.
- Train services from Liverpool which normally go to the City via Regents Park or Bankstown will now operate via Granville to an amended timetable.
- Express buses will operate during the morning and afternoon peak periods.
- Please pick up a trackwork brochure from your local station, visit www.cityrail.info, or phone the Transport Infoline on 131 500 for more details.
- Please allow an extra travel time of 30 minutes.

Bus Routes

- Route 5: All stations Bankstown to Cabramatta via Birrong and return
Route 7: All stations Lidcombe to Cabramatta via Regents Park and return
Route 8: All stations Bankstown to Lidcombe via Regents Park and return

Home

Inner West Line

2.00am Monday 23 January until 2.00am Thursday 26 January

Work: Lidcombe – Sefton Park Junction – Cabramatta - Bankstown

Customer Brochure

Reference: STN 0002

- Buses will replace trains between Lidcombe and Bankstown via Regents Park and also between Lidcombe and Cabramatta via Regents Park.
- Train services from Liverpool which normally go to the City via Regents Park or Bankstown will now operate via Granville to an amended timetable.
- A regular train service will continue to operate between Lidcombe and the City.
- Express buses will operate during the morning and afternoon peak periods.
- Please pick up a trackwork brochure from your local station, visit www.cityrail.info, or phone the Transport Infoline on 131 500 for more details.
- Please allow an extra travel time of 30 minutes.

Bus Routes

- Route 7: All stations Lidcombe to Cabramatta via Regents Park and return
Route 8: All stations Lidcombe to Bankstown via Regents Park and return

Home

Complete Track Possession Programme 2006 – 2007

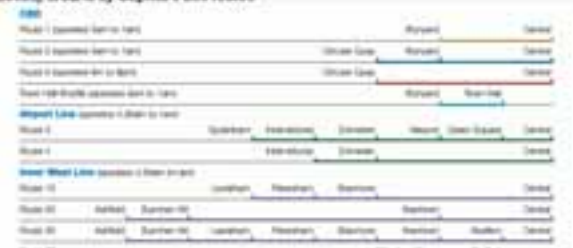


| Track | Start Date | End Date | Start Time | End Time | Work Description |
|-------|------------|----------|------------|----------|---|
| 1 | 1/10/06 | 31/10/06 | 00:00 | 00:00 | Track possession for maintenance work on the main line. |
| 2 | 1/11/06 | 30/11/06 | 00:00 | 00:00 | Track possession for maintenance work on the main line. |
| 3 | 1/12/06 | 31/12/06 | 00:00 | 00:00 | Track possession for maintenance work on the main line. |
| 4 | 1/01/07 | 31/01/07 | 00:00 | 00:00 | Track possession for maintenance work on the main line. |
| 5 | 1/02/07 | 31/02/07 | 00:00 | 00:00 | Track possession for maintenance work on the main line. |

Saturday and Sunday - Down Journey

| Bus No. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
|------------------|---------|---------|---------|---------|---------|---------|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Central | | | | 4:15 AM | 4:40 AM | | | | 4:45 AM | 4:55 AM | | | 5:15 AM | 5:25 AM | 5:45 AM | 5:55 AM |
| Sutherland | | | | | | | | | 5:31 AM | 5:40 AM | | | 6:01 AM | 6:11 AM | 6:31 AM | |
| Waterfall dep | | | | 5:10 AM | | | | | 5:45 AM | 5:55 AM | | | 6:15 AM | 6:25 AM | 6:45 AM | |
| Helensburgh | | | | | | | | | 6:00 AM | | | | 6:30 AM | | | |
| Helensburgh | | | | | | | | | 6:05 AM | | | | 6:35 AM | | | |
| Otford | | | | | | | | | 6:15 AM | | | | 6:45 AM | | | |
| Stanwell Park | | | | | | | | | 6:23 AM | | | | 6:53 AM | | | |
| Coal Cliff | | | | | | | | | 6:28 AM | | | | 6:58 AM | | | |
| Scarborough | | 4:20 AM | 5:20 AM | | | | | | 6:05 AM | | | | 6:35 AM | | | |
| Wombarra | | 4:25 AM | 5:23 AM | | | | | | 6:08 AM | | | | 6:38 AM | | 7:05 AM | |
| Cofedale | | 4:25 AM | 5:26 AM | | | | | | 6:11 AM | | | | 6:41 AM | | 7:11 AM | |
| Austinmer | | 4:30 AM | 5:30 AM | | | | | | 6:15 AM | | | | 6:45 AM | | 7:15 AM | |
| Thirroul | | 4:34 AM | 5:34 AM | | | | | | 6:19 AM | | | | 6:49 AM | | 7:19 AM | |
| Thirroul dep | | | | 5:47 AM | | | | | 6:00 AM | 6:30 AM | 6:31 AM | | 7:00 AM | 7:01 AM | | 7:28 AM |
| Bulli | | | | | | | | | 6:06 AM | 6:37 AM | 6:37 AM | | 7:06 AM | 7:07 AM | | |
| Woonona | | | | | | | | | 6:10 AM | 6:41 AM | 6:41 AM | | 7:10 AM | 7:11 AM | | |
| Bellambi | | | | | | | | | 6:16 AM | 6:47 AM | 6:47 AM | | 7:16 AM | 7:17 AM | | |
| Corrimal | | | | | | | | | 6:20 AM | 6:51 AM | 6:51 AM | | 7:20 AM | 7:21 AM | | |
| Towradgi | | | | | | | | | 6:24 AM | 6:55 AM | 6:55 AM | | 7:24 AM | 7:25 AM | | |
| Fairy Meadow | | | | | | | | | 6:28 AM | 6:59 AM | 6:59 AM | | 7:28 AM | 7:29 AM | | |
| North Wollongong | | | | | | | | | 6:33 AM | 7:04 AM | 7:04 AM | | 7:33 AM | 7:34 AM | | |
| Wollongong dep | 2:57 AM | 4:10 AM | 5:27 AM | 6:09 AM | 6:15 AM | 6:15 AM | | 6:40 AM | 6:50 AM | 7:11 AM | 7:20 AM | 7:20 AM | 7:41 AM | 7:32 AM | 7:30 AM | |
| Coniston | 3:00 AM | 4:13 AM | 5:30 AM | 6:12 AM | | 6:18 AM | | | | | 7:23 AM | | | | | |
| Unanderra | 3:10 AM | 4:23 AM | 5:40 AM | 6:22 AM | | 6:28 AM | | | | | 7:33 AM | | | | | |
| Kembla Gran. | | | | | | | | | | | | | | | | |
| Dapto arr | 3:20 AM | 4:33 AM | 5:50 AM | 6:32 AM | 6:35 AM | 6:38 AM | | | | | 7:43 AM | | | 7:51 AM | 7:50 AM | |
| Train departure | 3:25 AM | 4:39 AM | 6:05 AM | | | 6:43 AM | | | | | | | | | 8:05 AM | |

Getting around by CityRail's bus routes



CityRail bus routes

| Route | Start | End |
|----------|------------|------------|
| Route 1 | Woolongong | Woolongong |
| Route 2 | Woolongong | Woolongong |
| Route 3 | Woolongong | Woolongong |
| Route 4 | Woolongong | Woolongong |
| Route 5 | Woolongong | Woolongong |
| Route 6 | Woolongong | Woolongong |
| Route 7 | Woolongong | Woolongong |
| Route 8 | Woolongong | Woolongong |
| Route 9 | Woolongong | Woolongong |
| Route 10 | Woolongong | Woolongong |

Helpful Tips

- Please frame the name of the service.
- All services are subject to change.
- Please use the correct currency and time zone.
- All services are subject to change.
- Please use the correct currency and time zone.

City of News

City of News is a free service that provides news and information to the community. It is available on the City of News website and through the City of News mobile app.

Wheelchair Access


City of News is committed to providing wheelchair access to all services. Please contact us if you require wheelchair access.

Bus and Rail Link

City of News is committed to providing a bus and rail link between the City of News and the surrounding area.

Ticketing

City of News is committed to providing a range of ticketing options to meet the needs of all customers. Please contact us for more information.



Operation CBD

Bus replaces train
4 & 27 November 2006

Timetable for a New Railway

GEOFF MANN wrote us a letter arising from our *Dog's Breakfast* series—and then followed it up with his analysis of timetables for Victoria's RFR

Railway timetable compilers are as important today as ever. Why? Marketing. The days when comparatively few trains were run, often at times to suit the operators, are long gone. People today travel more often and demand speed, convenience and comfort. The timetabler has to meet these expectations for a railway timetable is integral to marketing the service. However, implementation of the ideal is often constrained by the available rolling stock and infrastructure, exacerbating the complexity of the task.

Many railway systems are increasingly using fixed formations in train consists, those with diesel or electric power cars at each end being the obvious examples. In Victoria the train consists currently in use vary considerably, resulting in a wide range of power/weight ratios. This is partly due to the disparity of peak and off-peak patronage. Typical loco hauled consists and approximate power/weight ratios are:

N class loco and 3 car N set (6.8kw/t), 4 car FN set (5.6kw/t), 5 car VN set (4.8kw/t) and 6 car 2xN set (4.5kw/t).

N class loco and 4 car FSH set (6.7kw/t), 5 car VSH set (5.9kw/t).

P class loco and 3 car SH set (4.6kw/t), 4 car FSH set (3.8kw/t). The SH sets are operated in pairs with a P class loco at each end in push-pull mode (top and tail), thus avoiding running around and creating the flexibility of a double ended formation.

Railcar power/weight ratios are considerably higher, being 9.2kw/t for a Sprinter (single car) and 9.6kw/t for a V'Locity (two car unit).

Then there are variations in maximum

permitted speeds. These are or will be:

N class locos 115km/h (it was intended to raise this to 130km/h as part of the Regional Fast Rail Project, but I am uncertain if the necessary changes to gear ratios are to be undertaken).

P class locos 100km/h.

Sprinter railcars 130km/h.

V'Locity railcars 160km/h.

Clearly, the timetable compiler has to be aware of the consist of each train in order to formulate an accurate set of running times. This was a well honoured railway practice (particularly in NSW) where trains were generally scheduled on the basis of a particular loco type together with intended loads. Train consists on particular lines in Victoria do vary widely. Ideally, variations in power/weight ratios should be minimized. Railcars are ideal in this respect as their ratio remains constant whatever the train length/capacity. On the Ballarat line in 2005, most services were operated by Sprinter railcars but some trips comprised N class locos and N carriage sets (or equivalent). Peak hour short workings to Melton or Bacchus Marsh were P class and FSH sets, 2xSH sets topped and tailed by P class, N class with FSH or VSH sets together with Sprinters. Thus some four theoretically different running times for loco hauled trains are imposed on the timetable compiler.

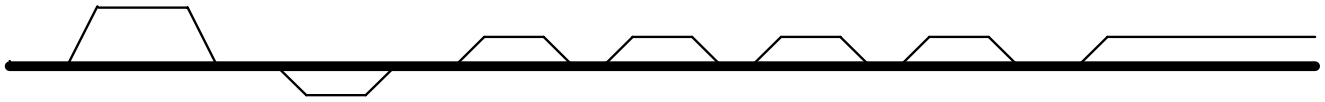
Running times are obviously best determined by test running which will take into account the gradients, speed restricted curves, etc. Practical considerations of passenger movements need to be incorporated into proposed public timings. Having determined the consist and running times, timetable construction can commence. Clearly, on high frequency lines with less

variable running times, computer programs can be devised and implemented with the certainty of consistent outcomes. On regional lines such as Melbourne to Ballarat, less intense frequencies together with variations in consists and stopping patterns virtually dictate manual construction of each service. Most readers will be familiar with the use of graphs in timetable planning as this method has been the traditional way of determining available paths.

Given a double tracked main line and sufficient rolling stock to meet the patronage, the task is straightforward. Traffic in each direction can be scheduled independently, the only consideration being the minimum intervals between following trains. Single track lines present a very different dimension however.

Let us assume that the market indicates that an hourly off peak frequency is the optimum. Anecdotal evidence suggests that memory times are preferred by the travelling public. On a double tracked line, with consistent stopping patterns and speeds, hourly trains will obviously pass each other every 30 minutes. On a single track, problems arise if one train is made slower by having to diverge into a crossing loop. If we assume that the train of lesser priority is allowed one additional minute to slow for 65km/h points, three minute arrival ahead of the opposing train, one minute departure after the opposing train and a further minute to accelerate to line speed, then crossing loops are required every 27 minutes running time for the express services (refer table below). This arrangement can be reversed when priority trains are designated from the opposite direction. Ideally, crossings should take place at stations in order to reduce the number of stops. The trend in

| Priority trains from City A to City B | | | 'Loop' trains from City B to City A | | | | | |
|---------------------------------------|----------|----------|-------------------------------------|--------|-----|------|------|------|
| | | | Arr | Loop 1 | dep | 1329 | 1429 | 1529 |
| 1228 exp | 1328 exp | 1428 exp | Dep | | arr | 1325 | 1425 | 1525 |
| | | | Arr | Loop 2 | dep | 1256 | 1356 | 1456 |
| 1255 exp | 1355 exp | 1455 exp | Dep | | arr | 1252 | 1352 | 1452 |
| | | | Arr | Loop 3 | dep | 1223 | 1323 | 1423 |
| 1322 exp | 1422 exp | 1522 exp | Dep | | arr | 1219 | 1319 | 1419 |



| | | | | | | | | |
|--------------|-------|----------|----------|--------|--------|----------|------------|-----------------|
| B'rat | B'ree | Bank Box | B. Marsh | Parwan | Melton | Rockbank | D. Park W. | Sunshine |
|--------------|-------|----------|----------|--------|--------|----------|------------|-----------------|

recent years has been to install loops between stations; a legacy from freight operation considerations. In essence, the infrastructure should be designed to meet the requirements of the timetable. Civil engineers need to understand this.

Let us look at Victoria's Melbourne to Ballarat line for example. It has been extensively rebuilt (including deviations) and resignalled as part of the Regional Fast Rail Project. Whilst line speeds have been considerably increased, the line is basically single and crossing loops remain in historic locations. The new deviation between Millbrook and Dunnstown has reduced line length by about 4.8 kilometres. (picture below). The former line via Bungaree (now known as the North Line) has been retained surprisingly in preference to construction of a new crossing loop in a more appropriate location. Present stopping patterns for trains between Sunshine

and Ballarat are Melton, Bacchus Marsh and Ballan except for a few peak hour variations. Crossing loops are available at Rockbank, Melton, Parwan, Bacchus Marsh, Bank Box and Bungaree North Line (refer diagram below). As Bacchus Marsh has only a single platform, it is unsuitable for crossing two stopping trains, although suitable for express and stopping trains. The section from Sunshine to Deer Park West is bi-directional double track. Another constraint on pathing is the suburban section from Southern Cross (Spencer Street) to Sunshine. On the basis of the same stopping pattern as today's trains and all being operated by V'Locity railcars, pairs of loops would be required about 27 minutes apart in order to provide an even interval hourly frequency.

My estimates of V'Locity running times including stops between existing loop pairs are: in the box below.

The most suitable crossing places are therefore considered to be Deer Park West, Bank Box Loop and Ballarat Station itself, using both platforms which would be less than ideal in terms of passenger convenience. This arrangement would result in long layovers. Whilst it is obviously possible to use other combinations of loops closer together, these result in a marked slowing of trains and also risks poor suburban pathing. Not a good solution! Possible remedies could be restoration of double track operation on the Warrenheip – Ballarat section or a new loop constructed on the Down side of Ballan (thus enabling the closure of the Bungaree North Line loop). To illustrate the difficulties of working with existing loops, the new 0625 train from Melbourne to Ballarat is scheduled to take 111 minutes, the slowest schedule by far in the present timetable. This train is introduced at a time when public expectation of time savings is high.

| | |
|--|------------|
| Deer Park West – Bank Box Loop | 27 minutes |
| Rockbank – Bank Box Loop | 23 minutes |
| Rockbank – Bungaree Deviation | 39 minutes |
| Melton – Bungaree Deviation | 34 minutes |
| Melton – Bank Box Loop | 20 minutes |
| Parwan – Bungaree Deviation | 31 minutes |
| Bank Box Loop – Bungaree Deviation | 17 minutes |
| Bank Box Loop – Ballarat via direct South Line | 27 minutes |

Let us hope then that timetable compilers are in future given input into infrastructure design and accorded the recognition and understanding which the role deserves.



Letter

I was most interested to read in the Australian Dog's Breakfast article that the rail network programming tool Viriato was used to build the V/Line Draft 2006 Timetable. I have studied the timetables produced for the four lines. It would appear that to allow the proposed suburban pathing, a complete upheaval of the present suburban timetable would be necessary. The timetable produced some impossible running times such as one minute from North Melbourne to (now) Southern Cross for the proposed 0645 up Ballarat. It scheduled two down trains through the single line South Geelong tunnel at the same time (1733). It produced quite different running times for Ballarat and Bendigo trains over the same sections in the suburban area, although train consists should be similar. Some running times, both within the suburban area and further afield are slower than at present, whilst others are seemingly ambitious and there are many variations. The proposed schedules do not appear to provide for "running" crosses on single line sections. Unfortunately, the location of crossing loops on the Bendigo and Ballarat lines make the operation of proposed regular hourly frequencies somewhat difficult.

Given these results from the implementation of the Viriato programming tool, I would be interested to learn of its origins, and whether it has been used successfully elsewhere.

Geoff Mann

Western Road Bus Timetables

ROBERT HENDERSON has good news for **JIM O'NEIL**— through the medium of the Time Lords (?), Western Road buses has heard his 2005 plea about a combined timetable— and published it back in 1967!

May I comment on the article about Western Road bus timetables, by Jim O'Neil in the December 2005 issue of "The Times". It was another in Jim's series of interesting articles about Sydney bus services of yesteryear.

Western Road Transport was run by the renowned Jack Spellacy, after he had sold his bus transport interests on the Blue Mountains. However, I believe that the change of company name from Western Road Transport Service to Western Road Bus Services represented the time when Jack Spellacy in turn sold the operation to Messrs Neyland & Thornleigh.

Jim refers to the fact that Route 210 origi-

nally ran from Prospect to Blacktown. So I enclose a copy of an undated (but about early 1970s) timetable for that service before it was taken over by Western Road. As can be seen, the route was run by Blacktown-Prospect Bus Co, whose principals were AL Earl & TA Foley. It appears to have been one of Sydney's "one-man, one-bus" services, which abounded in the immediate post-war period. It is interesting to note that when Routes 177 and 210 were amalgamated (probably starting in 1969), the new combined route took the number of the less frequent and more obscure of the two routes.

In his article Jim bemoans the omission from the early 1960s timetable of a combined timetable showing all trips between

Parramatta along the common section of route for Routes 174, 177, 179 and 213 as far as Hawkesbury Road. As if the owners could hear Jim's lament, they did actually produce such a combined timetable in at least May 1967, of which I enclose a copy.

This combined list of departures from both Parramatta Station and Hawkesbury Roads demonstrates how well the overall timetable was constructed, with trips well spaced at least every 10 minutes during the off-peak Mondays to Fridays, trips every 5 or 10 minutes on Saturday mornings and a regular half-hourly service on Sundays.

Yours sincerely

Robert Henderson, Terrey Hills

| SATURDAY | | | |
|------------------------|----------------------------|--------------------------|-------------------------|
| DEPART Prospect | ARRIVE Lancelot St. | ARRIVE Hayes R.J. | ARRIVE Blacktown |
| A.M. | A.M. | A.M. | A.M. |
| 7.45 | 7.50 | 7.55 | 8.00 |
| 8.30 | 8.35 | 8.40 | 8.45 |
| 9.15 | 9.20 | 9.25 | 9.30 |
| 10.00 | 10.05 | 10.10 | 10.15 |
| 10.45 | 10.50 | 10.55 | 11.00 |
| 11.30 | 11.35 | 11.40 | 11.45 |
| P.M. | P.M. | P.M. | P.M. |
| 12.15 | 12.20 | 12.25 | 12.30 |
| 3.30 | 3.35 | 3.40 | 3.45 |
| Blacktown | Hayes Rd. | Lancelot St | Prospect |
| A.M. | A.M. | A.M. | A.M. |
| 8.10 | — | 8.15 | 8.25 |
| 8.55 | 9.00 | 9.05 | 9.10 |
| 9.40 | 9.45 | 9.50 | 9.55 |
| 10.25 | 10.30 | 10.35 | 10.40 |
| 11.10 | 11.15 | 11.20 | 11.25 |
| 11.55 | P.M. | P.M. | P.M. |
| P.M. | 12.00 | 12.05 | 12.10 |
| 12.45 | 12.50 | 12.55 | 1.00 |
| 4.00 | 4.05 | 4.10 | 4.15 |
| 7.35 | 7.40 | 7.45 | — |
| 11.15 | 11.20 | 11.25 | 11.30 |
| SUNDAY | | | |
| Prospect | Lancelot St. | Hayes Rd. | Blacktown |
| A.M. | A.M. | A.M. | A.M. |
| 6.40 | 6.45 | 6.50 | 6.55 |
| Blacktown | Hayes Rd. | Lancelot St. | Prospect |
| A.M. | A.M. | A.M. | A.M. |
| 8.00 | 8.05 | 8.10 | 8.15 |

BLACKTOWN-PROSPECT BUS CO.

ROUTE 210 VIA HOSPITAL

BUSES FOR HIRE OR CHARTER

Phone: 72-3586, 631-9792,

Fairfield Printery. 72 1858.

MONDAY TO FRIDAY

Table with columns: DEPART (Prospect, Lancelot St., Hayes Rd., Blacktown), ARRIVE (Blacktown, Hayes Rd., Lancelot St., Prospect), and times for various routes.

BUS ROUTE 210.

Phone: 72-3586

BLACKTOWN-PROSPECT BUS CO.

VIA HOSPITAL VIA LEABONS LANE, VIENNA ST., FOWLER ST., HAYES RD., ORANA AVE. and WALPARK AVE.

NO SERVICE ON XMAS DAY, BOXING DAY, OR GOOD FRIDAY.

Large bus time table for routes 174-177-179-213, including departure times from Parramatta Station and Hawkesbury Road, and arrival times at various stations. Includes sections for Saturday and Sunday.

Wagga Wagga, Walgett, Wollongong, Yass, Young.

N.B. List of stations (1962) corrected.

It would thus be possible to make available the exact nature of the tabulated material. However, I am reluctant to go to the trouble of compiling such a list until I am informed just what you might require.

The disc concept was copied by the Department and its statutory successors in 1966 and 1982. The most recent version thus includes references to the XPT trains.

Apart from its intrinsic interest, one object of having this material published is to make it abundantly clear to those among readers of *The Times* who may still be so deluded as not to realise just how almost totally irrelevant to the needs of the travelling public in rural New South Wales are the existing country train services.

Incidentally, the 1943 list which I forwarded to you some time ago has already been published, but not without some errors, not of my making, in *Rail News Victoria*.

I look forward to hearing from you in due course.

Kind regards, Ross Willson

EXTRACT FROM ANNUAL REPORT
OF DEPARTMENT OF RAILWAYS
FOR 1937/38

Associated with the Departmental exhibit was the free distribution of 50,000 copies

of an artistic souvenir which has been acclaimed as unique in railway publicity. It took the form of a railway compendium. Composed of two circular pieces of pasteboard - the top one being slightly smaller than the other - these were joined together in the centre to permit of the easy revolution of the top board, on a central axis. On the obverse side of the souvenir, in the upper half of the circle, was a distinctive coloured map of New South Wales, showing railways and meteorological divisions. Beneath the map were cut-out apertures revealing statistical information about forty-eight of the State's principal towns, the names of which were printed in the circumference of the larger disc. By turning the top disc so that the arrowhead, in the form of a railway signal, pointed to the name of a town, such information as rail mileage from Sydney, and on what railway line; meteorological division; mean maximum and minimum temperatures; average annual rainfall; rank in population; and height above sea-level, was shown.

The reverse side of the souvenir was occupied by a photograph of the western frontage of the exhibit, together with the intimation that the souvenir had been printed to perpetuate the Railway exhibit.

The distribution of the souvenir at the Show was so successful as to evoke the following comment by the *Sydney Morning Herald*:-

"A Show souvenir issued by the New South Wales Government Railways for

free distribution at their stand in the Commemorative Pavilion, has become one of the sensations of the Show. Two policemen were required yesterday to control the queues which lined up to secure the souvenirs, and, although 50,000 were printed, it is already obvious that this large quantity will be totally inadequate to meet the demand. It has been suggested that the souvenir is of such useful and educational nature that a second edition should be put into print."

This latter suggestion was already under consideration, and immediately the Show was over a second edition of 20,000 copies of the souvenir was printed. In the reprinted souvenir the matter on the reverse side of the disc was completely changed.

Taking the place of the photograph of the exhibit used in the first prints, facsimiles of charts of vital railway statistics which had been on display at the Royal Show, were substituted.

As a gesture of goodwill on behalf of the Department of Railways, a parcel of 10,000 souvenirs was offered to, and gladly accepted by, the Department of Education for use in schools, both State and subsidised, all over New South Wales. In acknowledging their receipt the Department of Education stated that the disc chart was regarded as such an excellent teaching aid, that one would be supplied to each of the 9,500 separate class rooms in Departmental and subsidised schools as part of the permanent equipment of the rooms.

Who needs a timetable anyway?

'MS found on a railway newsgroup' - with apologies to EDGAR ALLEN POE

>> >>>>> Do you mean the other 5 drivers on the network who carry a working timetable? :-).

>> >>>> I don't carry a working timetable. 8-)

>> >>> OK, I'll bite. How would you know when the train is due out?

>> >> When the guard gives the rightaway. A bell rings. :-)

>> Jokes aside, when was the last time you saw anybody with a WTT perched on his lap while driving?

>Never, actually :-). But since "X" made his statement about on time running & his desire to campaign about it, I had to assume that at least one did!

I can work out the timetabled time for every station along the Illawarra line quite easily. If I drive as fast as I possibly can from Waterfall at up to 115 km/h and brake as hard as possible, I will leave Loftus about 20-30 seconds late. Most drivers

leave between 1 and two minutes late out of Loftus. You then get 3 minutes to get to Sutherland, with one minute standing time. I usually arrive at Sutherland a minute early and wait 2 minutes for time. We then get 2 minutes to get Jannali and 3 minutes to get to Como. It is impossible to leave Jannali on time (usually about 30 seconds late), but I regularly arrive at Como 1 minute early. Three minutes is ample to get to Oatley, and two minutes to Mortdale is also achievable. It is easy to work out how you are running by using sectional times, and also knowing times for major stations. For instance, on a skip stopper, I know times as Central: 21, Sydenham: 28, Hurstville: 40, Mortdale: 44, Sutherland: 55, Waterfall 09. Intermediate stations are worked out mathematically.

>Interestingly enough, I saw a batch of diagrams today with stopping patterns included, but no times. For the moment they are still unofficial according to the note on top of them.

Yeah, and full of errors.

China Rail Timetable

IAN MANNING takes us on a tour through one of the worlds largest rail systems—with phrase-book in hand.

If you discount Russia, Asia has three big railway systems – India, China and Japan. The Times has already covered the various Indian national timetables, so it is time to take notice of the others. Rather than attempt to review the largest of the Asian timetables – the Japanese National Timetable which appears monthly with well over a thousand pages each month – we will now consider the smallest, that from China.

At 350 pages sized 208mm x 144 mm, the China Rail timetable is both smaller and shorter than Indian Bradshaw. It is also, of course, entirely in Chinese, which makes it less accessible to Western readers. However, it is a timetable to be reckoned with, since it provides times for no fewer than 1194 passenger trains, or 2388 if one counts up and down separately. Nearly all of these trains run daily, though there are a few which run every second day, that is on

odd or even dates.

China does not name its trains; it numbers them. Train numbers are prominent in the timetable and appear on tickets, station signs (nowadays mostly LED) and on the origin-destination boards on the sides of every carriage. Train numbers are strictly odd for down and even for up, and a train which changes from up to down in the course of its journey bears a dual number, carrying the odd one of the pair when travelling down and the even one when travelling up.

In the 2004 timetable, top place is taken by the Z (pronounced zee) series trains – 19 train pairs numbered between Z1 and Z86. These are overnight all-sleeper expresses cleared for running at up to 160kph. Each train has 16 carriages including dining car. All but one pair connect Beijing with a major city in the 1000 to 1700 km range, with journey times ranging from 8 hours

20 minutes to 13 hours 40 minutes. Five of them run between Beijing and Shanghai (1463 km, just two minutes short of 11 hours), and counting the three other Z-series trains that leave for destinations just beyond or just short of Shanghai, a Z-series express heads down the Shanghai line from Beijing every seven minutes from 1853 to 1935. (This makes 7 trains – the straggler is Z49, which does not leave for Nanjing till 2144.) Because they do not make any intermediate stops, the Z-series trains are listed on a single page of the timetable which gives only their departure and arrival times.

After the Z-series comes the T-series, 195 train pairs numbered between T1 and T988. Train T1, the 1500 from Beijing West to Changsha, received this honourable number because it goes to the city nearest to Mao's birthplace. Many of the T-series trains travel long distances. The longest distance of all is covered by train

全国铁路旅客列车时刻表

徐州→郑州→西安→兰州→乌鲁木齐

| 车次 | 徐州 | 郑州 | 西安 | 兰州 | 乌鲁木齐 |
|------|-------|-------|-------|-------|-------|
| 152 | 11:51 | 13:02 | 14:13 | 15:24 | 16:35 |
| 153 | 12:03 | 13:14 | 14:25 | 15:36 | 16:47 |
| 55 | 06:18 | 07:29 | 08:40 | 09:51 | 11:02 |
| 69 | 06:30 | 07:41 | 08:52 | 10:03 | 11:14 |
| 75 | 06:42 | 07:53 | 09:04 | 10:15 | 11:26 |
| T112 | 06:54 | 08:05 | 09:16 | 10:27 | 11:38 |
| T116 | 07:06 | 08:17 | 09:28 | 10:39 | 11:50 |
| T139 | 07:18 | 08:29 | 09:40 | 10:51 | 12:02 |
| T192 | 07:30 | 08:41 | 09:52 | 11:03 | 12:14 |
| T197 | 07:42 | 08:53 | 10:04 | 11:15 | 12:26 |
| T231 | 07:54 | 09:05 | 10:16 | 11:27 | 12:38 |
| T295 | 08:06 | 09:17 | 10:28 | 11:39 | 12:50 |
| 659 | 08:18 | 09:29 | 10:40 | 11:51 | 13:02 |

乌鲁木齐→兰州→西安→郑州→徐州

| 车次 | 乌鲁木齐 | 兰州 | 西安 | 郑州 | 徐州 |
|------|-------|-------|-------|-------|-------|
| T194 | 17:31 | 18:42 | 19:53 | 21:04 | 22:15 |
| T198 | 17:43 | 18:54 | 20:05 | 21:16 | 22:27 |
| T232 | 17:55 | 19:06 | 20:17 | 21:28 | 22:39 |
| T296 | 18:07 | 19:18 | 20:29 | 21:40 | 22:51 |
| 660 | 18:19 | 19:30 | 20:41 | 21:52 | 23:03 |

T54/51, which takes 48 hours and 16 minutes to cover the 4077 kms between Urumchi and Shanghai. Its return service T52/T53 takes 47 hours and 13 minutes, benefiting from deviations that give it faster track in the mountains. These rather precise timings are not fictitious – timekeeping, while not perfect, is generally good. Five trainsets are required to maintain the service, each of 16 carriages including dining car, soft sleeping car with 4-berth compartments, hard sleepers with 6-berth open bays, and booked hard-seat cars.

T-series trains numbered T351 and above are mostly relatively short-distance inter-city services, such as T720, the 0844 from Shanghai that takes 2 hours and 42 minutes to cover the 303 km to Nanjing. Many of these trains have double-deck carriages. There are 11 daily T-series services between Beijing and Tianjin (137 km), and many others from Guangzhou towards Hong Kong. Like the Z-series, all T-series trains are air-conditioned.

Following the T-series comes the K-series, 125 train pairs numbered between K3 and K397, and then the N-series, 205 train pairs numbered between N1 and N997. In general, the Ks travel further than the Ns.

These trains are slower, and stop more often, but are still up to 22 carriages long, including dining car. The overnight services have the two classes of sleeper and hard seats; the day services have soft and hard seats. Many of these trains run on secondary main lines, and many have dual numbers because they change from down to up – a few even have triple numbers because they change twice. Most, but not all, K and N series trains are air-conditioned.

Finally, the national timetable includes a further 650 trains numbered between 1003 and 8994. The lower numbers include some quite important air-conditioned services, while in the high number ranges there are various slow services using old green carriages heated by coal-fired stoves, with plenty of hard seats but no dining cars. Some serve branch lines and some are main line locals, but both these types of service are gradually disappearing from the timetable.

In addition to all these, but not included in the national timetable, is an unknown number of L-series local services. These can still be substantial trains, with a dozen or so green carriages bound on journeys of a



couple of hundred kilometres. The timetable also omits most of the trains that run on provincially-owned local railways, and all the trains that run on colliery railways.

Despite the large number of services, there is a notable lack of commuter trains. There simply isn't the capacity to handle them at

全国铁路旅客列车时刻表

| 乌鲁木齐⇌奎屯⇌阿拉山口 | | | | | | | | | | 乌鲁木齐⇌阿克苏⇌喀什 | | | | | | | | | | 达州⇌南充⇌成都 | | | | | | | | | | | | | | | |
|--------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| N955 | S801 | S802 | 车 | 次 | N856 | S802 | S804 | N846 | S806 | S807 | 车 | 次 | N848 | S808 | S805 | 车 | 次 | N | N | N | N | N | N | N | N | N | N | N | N | N | | | | | |
| | | | 自 | 起 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | 阿 | | | | | |
| | | | 公 | 司 | 公 | 司 | 公 | 司 | 公 | 司 | 公 | 司 | 公 | 司 | 公 | 司 | 公 | 公 | 公 | 公 | 公 | 公 | 公 | 公 | 公 | 公 | 公 | 公 | 公 | 公 | | | | | |
| | | | 始 | 发 | 终 | 到 | 始 | 发 | 终 | 到 | 始 | 发 | 终 | 到 | 始 | 发 | 终 | 到 | 始 | 发 | 终 | 到 | 始 | 发 | 终 | 到 | 始 | 发 | 终 | 到 | 始 | 发 | 终 | 到 | |
| 03:58 | 04:59 | 05:10 | 乌鲁木齐 | 07:38 | 08:43 | 09:41 | 03:58 | 04:59 | 05:10 | 06:10 | 07:12 | 08:13 | 09:15 | 10:17 | 11:19 | 12:21 | 13:23 | 14:25 | 15:27 | 16:29 | 17:31 | 18:33 | 19:35 | 20:37 | 21:39 | 22:41 | 23:43 | 24:45 | 25:47 | 26:49 | 27:51 | 28:53 | 29:55 | 30:57 | 31:59 |
| 01:14 | 03:41 | 06:09 | 阿拉山口 | 05:05 | 07:32 | 10:00 | 04:40 | 07:07 | 09:34 | 12:01 | 03:28 | 05:55 | 08:22 | 10:49 | 13:16 | 15:43 | 18:10 | 20:37 | 23:04 | 25:31 | 27:58 | 30:25 | 32:52 | 35:19 | 37:46 | 40:13 | 42:40 | 45:07 | 47:34 | 50:01 | 52:28 | 54:55 | 57:22 | 59:49 | |
| 00:23 | 02:50 | 05:17 | 阿拉山口 | 04:05 | 06:32 | 08:59 | 02:50 | 05:17 | 07:44 | 10:11 | 01:40 | 04:07 | 06:34 | 09:01 | 11:28 | 13:55 | 16:22 | 18:49 | 21:16 | 23:43 | 26:10 | 28:37 | 31:04 | 33:31 | 35:58 | 38:25 | 40:52 | 43:19 | 45:46 | 48:13 | 50:40 | 53:07 | 55:34 | 58:01 | 60:28 |
| 00:31 | 02:58 | 05:25 | 阿拉山口 | 04:13 | 06:40 | 09:07 | 03:01 | 05:28 | 07:55 | 10:22 | 01:48 | 04:15 | 06:42 | 09:09 | 11:36 | 14:03 | 16:30 | 18:57 | 21:24 | 23:51 | 26:18 | 28:45 | 31:12 | 33:39 | 36:06 | 38:33 | 41:00 | 43:27 | 45:54 | 48:21 | 50:48 | 53:15 | 55:42 | 58:09 | 60:36 |

陇海方向

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乌鲁木齐站营业部 0991-7945169
昌吉营业部 0994-2528881
哈密营业部 0902-7133018
库尔勒营业部 0996-8642312
喀什营业部 0998-5881111
阿克苏营业部 0997-6844666

达州⇌南充⇌成都

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the big city stations.

It is notable that nearly all long-distance trains include a dining car. Not only do these provide sit-down meals for passengers and crew; they service the trolleys from which meals are sold to passengers in their seats. A rough estimate would be that between 1500 and 2000 dining cars operate in China every day. This has to beat Amtrak, previously mentioned in the Times as the world's largest dining car operator, and the food is better.

The timetable is arranged in sections, each introduced by a schematic map of the lines covered. There are 52 pages for the main line from Beijing to Guangzhou plus its branches, followed by 36 pages for the far west and south west, then 50 pages for the east coast and a mere dozen pages for the main line which finds its way direct from Beijing nearly to Hong Kong. A further 68 pages cover the north-east, then 17 for the north-west, one for services into Hong Kong, and four for international services. There are through services to Pyongyang

and Hanoi, and other services involving break of gauge to Moscow (two routes, via the north-east and via Mongolia), in the east to Vladivostok and Khabarovsk, and in the west to Alma Ata.

Early editions of the China National Timetable included two tables for each main line: a table with an abbreviated list of stations for expresses, and a table with a long list for stopping trains. This is still the basic principle, but space is now saved by omitting stations at which the trains in the particular table do not stop. The number of tables has multiplied as trains have been added and stopping patterns have become more varied. Branch lines have separate tables, but short branches may be shown as additional stops in a main-line table; equally, main line running by branch trains is likely to be shown on the branch table. Where a train does not stop, there is an arrow; where it does not pass a station, there is an = sign. Down trains read down, and up trains read up even on tables that show only up trains. The tables are not numbered, all tables being referred to by

page number.

To give an idea of what a main-line table looks like, consider page 55, which covers over 3000 km going east from Urumchi. These are up trains, and this is a read-up page. The trains are all T-series, which shows that it is an important main line – less important trains, which make additional stops, are shown on other tables. Below the train number each column has the train origin and starting time, and its destination and terminating time. Train T152 originates on a secondary main line. Trains like T54/T51 do not pass these stations, hence the = sign. Trains that go from this table to page 4 or 5 are heading to Beijing, those that go to page 90 are heading to Shanghai or Nanjing. Arrival and departure times are given for each station stop, and generally allow enough time for passengers dissatisfied with the dining car to patronise the platform vendors.

Page 70 shows some of the trains running west from Urumchi. Sharp-eyed readers will notice that the table at the bottom right

全国铁路旅客列车时刻表

| 玉屏⇌贵阳 | | | 麻尾⇌都匀 | | | 都匀⇌贵阳 | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 6639 | 车次 | 6644 | 6643 | 车次 | 6644 | 6641 | 车次 | 6642 |
| 玉屏 | 自起 | 始发 | 贵阳 | 麻尾 | 自起 | 始发 | 都匀 | 贵阳 |
| 08:58 | 08:55 | 16:27 | 16:00 | 07:10 | 07:40 | 17:50 | 17:50 | |
| 贵阳 | 终到 | 玉屏 | 都匀 | 终到 | 麻尾 | 贵阳 | 终到 | 都匀 |
| 16:21 | 17:00 | 07:21 | 12:35 | 12:35 | 12:35 | 17:20 | 17:20 | |
| 08:38 | 0 | 17:40 | 18:00 | 0 | 12:35 | 07:46 | 0 | 12:20 |
| 08:54 | 14 | 16:45 | 16:29 | 7 | 12:34 | 07:57 | 6 | 22:11 |
| 09:07 | 26 | 16:27 | 16:51 | 19 | 12:01 | 08:05 | 9 | 22:02 |
| 09:31 | 46 | 16:01 | 17:08 | 31 | 11:44 | 08:16 | 18 | 21:51 |
| 09:42 | 56 | 15:48 | 17:29 | 40 | 11:30 | 08:46 | 37 | 21:21 |
| 09:52 | 64 | 15:34 | 17:42 | 47 | 11:16 | 08:57 | 41 | 21:06 |
| 09:56 | 73 | 15:30 | 18:02 | 57 | 10:57 | 09:08 | 48 | 20:56 |
| 10:08 | 80 | 15:18 | 18:14 | 62 | 10:28 | 09:23 | 55 | 20:41 |
| 10:24 | 90 | 14:46 | 18:43 | 74 | 10:02 | 09:57 | 70 | 20:10 |
| 10:51 | 108 | 14:23 | 19:43 | 101 | 09:04 | 10:33 | 85 | 19:32 |
| 11:01 | 115 | 14:11 | 20:31 | 120 | 08:20 | 10:57 | 102 | 19:10 |
| 11:25 | 125 | 13:59 | 21:01 | 135 | 07:43 | 11:11 | 108 | 18:58 |
| 11:44 | 141 | 13:37 | 21:21 | 142 | 07:10 | 11:38 | 129 | 18:34 |
| 11:55 | 148 | 13:29 | | | A | 12:03 | 136 | 18:15 |
| 12:05 | 156 | 13:17 | | | A | 12:45 | 141 | 18:03 |
| 12:11 | 165 | 13:09 | | | A | 12:56 | 149 | 17:50 |
| 12:26 | 182 | 13:01 | | | | | | |
| 12:43 | 192 | 12:40 | | | | | | |
| 13:01 | 202 | 12:18 | | | | | | |
| 13:23 | 225 | 11:57 | | | | | | |
| 13:38 | 242 | 11:40 | | | | | | |
| 14:03 | 254 | 11:24 | | | | | | |
| 14:15 | 263 | 11:10 | | | | | | |
| 14:18 | 278 | 11:08 | | | | | | |
| 14:37 | 295 | 10:51 | | | | | | |
| 14:56 | 301 | 10:33 | | | | | | |
| 15:12 | 316 | 10:06 | | | | | | |
| 15:32 | 329 | 09:45 | | | | | | |
| 15:58 | 334 | 09:23 | | | | | | |
| 16:10 | 342 | 09:08 | | | | | | |
| 16:21 | | 08:55 | | | | | | |

京厂方向

陇海方向

中铁快运有限公司北京管理分公司
 客服热线:010-63745900
 三里河营业部 010-68520183 北京西站营业部 010-51824435
 通州营业部 010-81558366 朝阳营业部 010-84543714
 北京站营业部 010-51832048 海淀营业部 010-62642879
 北京南站营业部 010-51837572
 宣武营业部 010-63401105
 丰台园区营业部 010-83681157
 怀柔营业部 010-69633485
 涿州分公司 0312-3630392



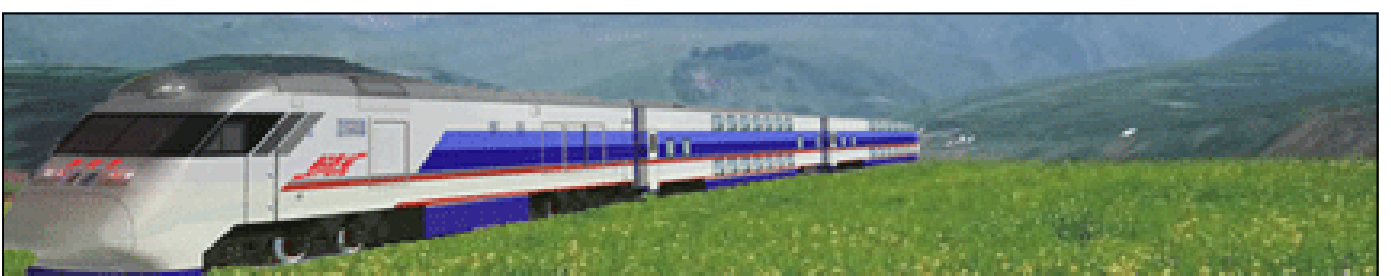
of the page shows short workings of the table above it – an example of the way in which tables are cut and split to fit them into the space available. Even these two together do not show the complete service on the line. There are two more trains, a through train from the east, shown on a main line timetable, and a local which has its own listing. The station at 1588 km is Kashgar, the most westerly station in China. The table at the top left covers some of the services to the Kazakh border at Alishankou. Again, not all trains are shown: there is an international train with

its own table, a through train shown on a main line table, plus local trains not shown in the timetable.

A timetable where any stretch of track may be shown on several tables requires good indexing. This is a problem in Chinese, since it has no alphabetical order. However, the timetable now incorporates a station index, with the station names written in Chinese script but listed in the English alphabetical order of their pin-yin transliterations (which are not shown). It also has a list of trains by number, with

origin, destination, departure time from origin, arrival time at destination, elapsed journey time, whether air-conditioned, fare for the whole distance in hard seats, hard sleeper and soft sleeper (if available), and a page reference for the train starting point. There is also a section listing departures from each major station. The timetable concludes with fare tables.

Once one has got over the hurdle of reading Chinese it is a fascinating document.



From the Weekly Notice....#2

The movement of steam trams and, later, electric trams hauled by steam, around the suburbs of Sydney is relatively well-known. The Weekly Notices of the 1910s nearly always had such a move listed. Less well-known is that transfers also took place between Sydney and Newcastle. It was a slow old trip of nearly 12 hours—witness the following, from Weekly Notice 39/1914. I wonder if they did it to Broken Hill?

TIME-TABLE FOR TRAMWAY MOTORS, HAMILTON TRAMWAY SIDINGS TO SYDNEY.

(Motors not fitted with Railway Type Wheels.)

Sunday, September 27.

| | XX Motors Nos. 14 and 65. a.m. | | XX— continued. a.m. |
|--------------------------|---|---------------------------|---------------------------|
| HAMILTON Dep. | 1 0 | Hornsby Arr. | 9 10 |
| Cockle Creek Arr. | 1 45 | Do Dep. | 9 15 |
| Do Dep. | 1 40 | Pennart Hill's Arr. | 9 30 |
| | — 407 | | — 75 |
| Fassifern Pass | 2 15 | Do Dep. | 9 35 |
| Wyee Arr. | 3 35 | Becroft Arr. | 9 40 |
| | — 8 | | — 77 |
| Do Dep. | 4 10 | Do Dep. | 9 56 |
| Wyong Arr. | 4 50 | Epping Arr. | 10 8 |
| Do Dep. | 4 55 | | — 10 |
| Gosford Arr. | 5 55 | Do Dep. | 10 20 |
| Do Dep. | 6 10 | | Run on Relief Line. |
| Hawkesbury Arr. | 7 15 | Eastwood Arr. | 10 25 |
| Do Dep. | 7 20 | | — 306 |
| Cowan Arr. | 7 45 | | — 305 |
| | — 12 | Do Dep. | 11 0 |
| Do Dep. | 8 17 | Ryde Arr. | 11 7 |
| North Hornsby Arr. | 8 55 | Do Dep. | 11 12 |
| | — 71 | Strathfield Pass | 11 45 |
| Do Dep. | 9 5 | | Main Line. |
| Hornsby Arr. | 9 10 | | p.m. |
| Do Dep. | 9 15 | SYDNEY Arr. | 12 30 |

XX will be Motors Nos. 14 and 65 from Hamilton Tramway Sidings to Sydney.

XX will run on Up Main Line from Strathfield, and cross to Botany Road Sidings at Redfern Tunnel. Yard Master, Sydney, to see that Botany Road Sidings are kept clear for the arrival of XX.

The speed of XX not to exceed 15 miles per hour, reduced to 4 miles per hour over all points and crossings. Those in charge of the Motors must exercise every care so as to prevent any risk of derailment.

Loco. Inspectors, Hamilton and Eveleigh, to provide Pilot Driver.

As far as possible, the above Special must be kept clear of any Goods trains, but special attention must be given by all concerned, so as to ensure the best working being carried out, and in order to prevent any unnecessary delays to Motors and Goods trains.

Block Working to be "switched-in" at Kuring-gai, North Hornsby, Becroft, and Eastwood for XX.

Care to be taken by all concerned to see that the instructions contained in Weekly Notice No. 52, 1913, with respect to Tramway Motors (not fitted with railway type wheels) running on railway lines, are strictly adhered to. The speeds to be as laid down above.