



The Times

June 2005

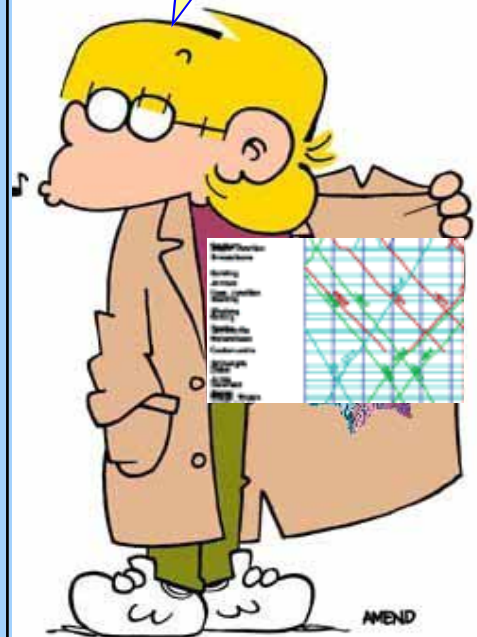
A journal of transport timetable history and analysis

Finland!...Finland!...Finland!

FINNISH NETWORK STATEMENT 2004

Finnish Rail Administration
Traffic System Department

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Inside: Punchbowl buses

One-stop shopping for train paths

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The Times

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On the front cover

In Ye Olde Timetable Worlde, there was no such a thing as a 'Network Statement'. Now, they are all over us like a rash. What on earth can they be? What they are are the Beginners' Guides for those who want to buy train paths or slots from a modern 'Infrastructure Provider'—what we used to call a 'Railway'. Now, if you own a prototype trainset and want to run it over somebody's tracks, you need to know all the details of those tracks before you can work out when to run your train and how long it is going to take to get it from A to B. If you have your own software, you can even rough-out your 'train path'- i.e. train timetable. But in most places you will have to purchase one that the Infrastructure Provider has built using their own facilities. If you are a European train operator, you can literally walk into a 'one-stop-shop' anywhere on the Continent and buy a train path off the shelf, to send your train to any place you like within the European Union. How this all came about is described in this issue, starting

THOUGHTS ON A STATION PLATFORM

It ought to be plain: how little you gain: by getting excited: and vexed.

You'll always be late: for the previous train,: and always in time : for the next

Piet Hien: Mathematician and Poet

Editorial Team Geoff Lambert, Victor Isaacs, Duncan MacAuslan.

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Names: the saga continues, Big stink about Bradshaw

Letters

COLIN TAYLOR writes about more nomenclature curiosa:

Dear Geoff

I have been fascinated by recent articles and correspondence on Australian station names.

Victor's list of foreign names omitted one that has long been a source of controversy: Almaden in North Queensland. Popularly supposed to be of German origin it was changed at some stage (World War I or II, no doubt) to Alma-Den, hyphenated, with the accent on the last syllable instead of as formerly believed pronounced Al-MAH-den. However, it is the name of a town in Spain, and there are items in the local hotel relating to that association. Whether of course any of the Australian stations were consciously named after their namesakes abroad another matter - could be simply coincidence.

There is one glaring omission to Victor's list - Roma, capital of Italy and well-known and loved regional centre of Queensland - not to mention Roma St in Brisbane itself. Others I would add include, all in Queensland, Jericho and Jaffa (Israel), Alba (Italy), Nashville and Pomona (USA) and Tara, which is a place in USSR, but probably takes its Australian name from the Irish "harp that once through Tara's halls", wherever in the Emerald Isle that is.

Another interesting list to compile could be of double-barrelled station names. Wagga Wagga is the obvious one, but off-hand I can think of Grong Grong in NSW, Pura Pura, Vite Vite and Nerrin Nerrin in Victoria, and Milaa Milaa in Queensland. A quick glance at an old WTT from Victoria confirms Lal Lal and Lang Lang as additions. Any others?

REUBEN TURNER, an Editorial Assistant at Thomas Cook Overseas Timetable, has to hold his nose when he reads Newman's Indian Bradshaw:

Hello Geoff

It was with much mirth that I read Victor Isaacs' article about Newman's Indian Bradshaw in the April edition of *The Times*! This fabulous publication has been the

source of much irritation (both to my brain and my nose due to the "quality" of the paper it is printed on) since I started here at Thomas Cook 4 years ago!

Whilst this is undoubtedly the most complete timetable of scheduled Indian Rail services, it is also one of the most difficult to use, containing as it does absolutely no map whatsoever, and the inclusion of "next table" numbers does little to help as the relevant tables may be spread over several pages! Since the edition that Victor reviewed, the publication has changed slightly; it now has a full colour cover (the November 2004 edition's cover was a collage of British photos including one of a pair of the long deceased class 76 Bo Bo electrics that used to work the Woodhead route), and the size of the book has increased to approximately 180mm in width by 237mm in height. This has been accompanied by an increase in the size of the text which has made the publication easier to read, if not to use!

We have used the book for many years now in order to compile and update the Indian section of the Thomas Cook Overseas Timetable, however the last two years or so have seen us become increasingly reliant on the Internet for obtaining information. This still has its limitations, and indeed the Bradshaw is the ONLY source we know of for schedules for the many branch lines in India that do not have any

through services to major towns or cities, and is also most useful for finding out which lines are shut for gauge conversion work.

Unfortunately, the Bradshaw now seems to be very hard to get hold of outside of India these days. We used to have a subscription to the monthly edition but that lapsed some time last year and out attempts to re-subscribe have come to nought, thus we rely on the generosity of our contacts to purchase the odd copy if and when they happen to be in India.

With regard to the "Trains at a Glance", there is one annual national publication which covers the major through express services between the different railways. Many of the railways also publish their own versions that contain more localised information, although none of them that I have seen in the past could really be called complete! The Overseas Timetable has a fairly comprehensive section covering Indian Railways, something like 35 pages, which covers nearly all of the express services and many local and branch line services too. It is probably best described as a happy medium between the Bradshaw and the Trains at a Glance!

Anyway, I hope this is of some interest and hasn't bored you to death!. Keep up the good work with *The Times*, it's always an interesting read!

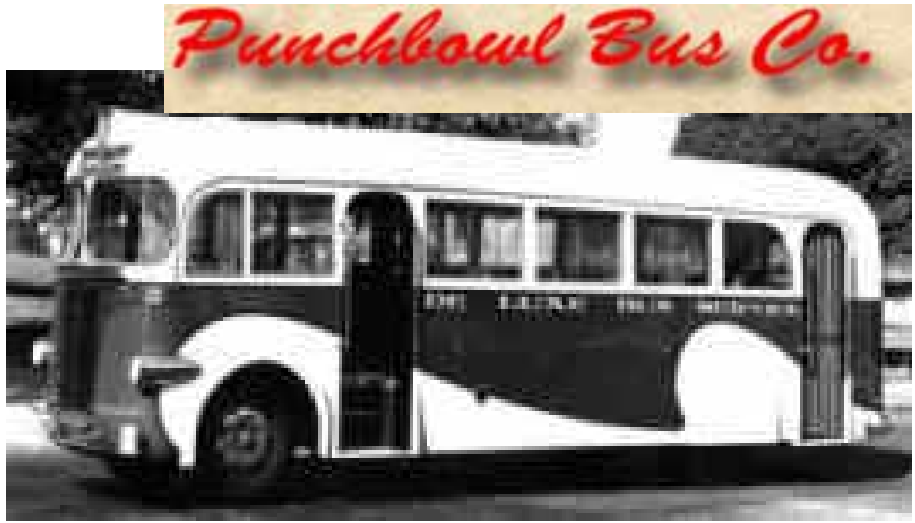


Another bus route through Punchbowl

JIM O'NEIL ventures into Southwestern Sydney again

In The Times of September 2004, I looked at two of Punchbowl Bus Company's services, the routes 36 and 188, which ran via two different routes between Punchbowl and Mortdale Stations. This month I am looking at another of Punchbowl's routes, the 189, which ran parallel to the 36 between Punchbowl and Riverwood Stations, and along the same road, Belmore Road, for about a mile south of Riverwood. The 189 ran from Bankstown Station north east into Greenacre, then south to Punchbowl, Roselands and Riverwood on its way to Lugarno. When I first met the Punchbowl Bus Company, it was actually two different routes, with a gap of about a mile between them.

The southern half was the route 140. My only timetable for the 140 (below and page 5) was issued on Monday 25th October 1965. In the early morning, before 8 a.m., and again in the early evening after 6 p.m., the service ran only between Lugarno and Riverwood Station, using a single bus (the shift 2). There were no services after 7.36



p.m. This bus (shift 2) started and finished its run at Bonds & Hannans Roads, at the Punchbowl company Depot. In between these hours a second bus (shift 24) also operated and both ran north of Riverwood to Bonds Road, where they turned east, past the depot, to Narwee Station (the next on the East Hills line towards the city) and then north to the fairly new

shopping centre at Roselands.

We may note that both buses generally leave Roselands under an hour later than their previous departure, so that the shift 24 leaves at 10.25 and then 11.15 and the shift 2 at 11.0 and 11.50. Both shifts take a short break around noon, presumably for crib, with the shift 2 leaving at 11.50, but then

PUNCHBOWL BUS CO. LTD.		SCHEDULE											
Route 140		via Bond's Rd - Riverwood - Lugarno - Bonds Rd - Shopping Centre											
DEPART		DEPART		DEPART		ARRIVE		DEPART		DEPART		ARRIVE	
Bus No.	Roselands Shopping Centre	Riverwood Station	Bonds & Hannans Roads	Riverwood Station	Isaac St., Belmore Rd.	LUGARNO	LUGARNO	Isaac St. and Belmore Rd. Station	Riverwood	Bonds & Hannans Roads	Riverwood Station	Roselands Shopping Centre	
FROM ROSELANDS to LUGARNO				ON TUESDAYS to FRIDAYS				FROM LUGARNO TO ROSELANDS					
	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	
2	-	-	8:11	8:14	8:18	8:23	8:25	8:31	8:36	-	-	-	-
2	-	-	-	8:38	8:42	8:47	8:48	8:54	8:59	-	-	-	-
2	-	-	-	9:11	9:14	9:19	9:10	9:16-NS	9:19	-	-	-	-
2	-	-	-	9:21	9:25	9:30	9:31	9:38	9:44	-	-	-	-
2	-	-	-	9:46	9:50	9:55	9:56	10:03	10:09	8:19	8:12	8:18	-
24	-	-	8:17	8:20	8:24	8:29	8:31	8:38	8:44	8:51	8:54	8:57	8:59
2	8:20	8:26	8:29	8:32	8:35	8:42	8:43	8:50	8:53	8:56	8:59	9:02	9:05
24	8:44	8:49	8:52	8:55	8:58	9:06	9:10	9:17	9:20	9:23	9:26	9:29	9:32
2	9:17	9:18	9:16	9:19	9:22	9:29	9:30	9:37	9:40	9:42	9:46	9:52	9:52
24	9:35	9:41	9:44	9:47	9:50	9:57	10:00	10:07	10:10	10:13	10:16	10:22	10:22
2	9:54	10:00	10:03	10:06	10:09	10:16	10:18	10:25	10:28	10:31	10:34	10:40	10:40
24	10:25	10:31	10:34	10:37	10:40	10:47	10:50	10:57	11:00	11:03	11:06	11:12	11:12
2	11:00	11:06	11:09	11:12	11:15	11:22	11:25	11:32	11:35	11:38	11:41	11:47	11:47
24	11:15	11:21	11:24	11:27	11:30	11:37	11:40	11:47	11:50	11:53	11:56	12:02	12:02
2	11:50	11:56	11:59	12:02	12:05	12:12	12:15	12:22	12:25	12:28	12:31	12:37	12:37
24	12:15	12:21	12:24	12:27	12:30	12:37	12:40	12:47	12:50	12:53	12:56	1:02	1:02
2	1:00	1:06	1:09	1:12	1:15	1:22	1:25	1:32	1:35	1:38	1:41	1:47	1:47
24	1:35	1:41	1:44	1:47	1:50	1:57	2:00	2:07	2:10	2:13	2:16	2:22	2:22
2	2:00	2:06	2:09	2:12	2:15	2:22	2:25	2:32	2:35	2:38	2:41	2:47	2:47
24	2:25	2:31	2:34	2:37	2:40	2:47	2:50	2:57	3:00	3:03	3:06	3:12	3:12
2	2:50	2:56	2:59	3:02	3:05	3:12	3:15	3:22	3:25	3:28	-	-	-
24	3:15	3:21	3:24	3:27	3:30	3:37	3:40	3:47	3:50	3:53	3:56	4:02	4:02
2	3:40	3:46	3:49	3:52	3:55	4:02	4:05	4:12	4:15	4:18	4:21	4:27	4:27
24	4:05	4:11	4:14	4:17	4:20	4:27	4:30	4:37	4:40	4:43	4:46	4:52	4:52
2	4:30	4:36	4:39	4:42	4:45	4:52	4:55	5:02	5:05	5:08	5:11	5:17	5:17
24	4:55	5:01	5:04	5:07	5:10	5:17	5:20	5:27	5:30	5:33	5:36	5:42	5:42
2	5:20	5:26	5:29	5:32	5:35	5:42	5:45	5:52	5:55	-	-	-	-
24	5:45	5:51	5:54	5:57	6:00	-	-	-	-	-	-	-	-
2	-	-	-	6:00	6:03	6:10	6:13	6:19	6:22	-	-	-	-
2	-	-	-	6:25	6:28	6:35	6:38	6:45	6:48	-	-	-	-
2	-	-	-	6:50	6:53	7:00	7:03	7:10	7:13	-	-	-	-
2	-	-	-	7:12	7:15	7:22	7:25	7:32	7:35	7:38	-	-	-

Route 140 Lugarno - Roselands Punchbowl Bus Co.: Monday 25th October 1965

not until 1.08 and the shift 24 having a gap from 12.15 to 1.35. A quarter of an hour seems a bit short to have one's lunch, but why else is there that gap? On Saturdays both shifts operated between the hours of eight a.m. and one p.m., again with somewhat less than an hour to complete a full circuit. At the southern end of the route 140, it overlapped with Saint's route 109, Hurstville to Lugarno and for its northern half, it overlapped with, or ran close to, various other Punchbowl routes.

I obtained my first timetable for the 189 at the same time (see page 6). It has no date and may appear to have been issued by a different bus company, since it is authorised by the G.P. Bus Co. But the address is the same as that for the Punchbowl Bus company, 56 Hannans Road Riverwood, and the same company used several different names at this time. The 189 was one of two routes operated by Punchbowl in the Greenacre area. On the front page of the timetable we can see the reference to other services between Punchbowl and Bankstown on the route 4, which also ran via Greenacre, but on a different set of roads, and had once reached further north. The route 189 got to Boronia Road at its fur-

thest north, while the route 4 went four long blocks further north, to Cardigan Road. In this timetable, the 189 also reaches Cardigan Road. Greenacre was also served by the route 27, from Strathfield to Bankstown and by the route 47 from Lakemba Station. So this area of old settlement was well provided with bus services, in 1965, as it still is.

There were three shifts operating on the 189, though all three were operating at the same time only in peak hours. There were also additional peak hour services, with the shift 18 running from Hillcrest Avenue at 7.56 to Bankstown in the morning and the shift 3 from Greenacre P.O. at 3.32 to Punchbowl in the afternoon. In shopping hours two shifts provided a half hourly service, with the 7 taking a break between 9.16 and 9.58 and the 1 having a break between 9.49 and 10.23. Enough time to take a meal, even if it's a bit early for lunch (they've never been worried about rostering odd hours for meals in the bus industry). The 9 then finishes at 10.19 and doesn't start again until 3.15 in the afternoon. The 189, unlike the 140, provides service well into the evening, with shift 7 operating until 11.31 p.m. That shift definitely

requires two drivers to operate it.

On Saturdays there are only two shifts in the morning peak, the 1 and the 7, while the third shift, the 9 appears for the morning shopping hours, providing service between Greenacre P.O. and Bankstown. Although it doesn't say so anywhere, the 9 seems to be operating a loop service, not stopping at Waterloo and Cardigan outbound until 10.30, or inbound thereafter. There is a half-hourly service to and from Punchbowl, and with the extra buses, a quarter-hourly service between Bankstown and Greenacre. On Saturdays shift seven continues operating until 12.17 the next morning. The 189 operates on Sundays and Holidays (including Good Friday and Christmas Day). It has only one shift (number 1) which runs between 8.5 a.m. and 7.57 p.m., with a break for lunch at Bankstown from 12.28 to 1.35.

The service levels on the 189 are better than those on the 140 in almost all ways. The only thing the 140 had, which the 189 did not, was service to Roselands shopping centre. By the time of my next timetable, which is undated, but was current in 1987 (see page7), this had been remedied by combining the two routes and extending

		ROSELANDS			PUNCHBOWL			BANKSTOWN			ROSELANDS SHOPPING CENTRE	
No	DEPART	ARRIVE	DEPART	ARRIVE	DEPART	ARRIVE	DEPART	ARRIVE	DEPART	ARRIVE	DEPART	ARRIVE
	STRAETHFIELD STATION	NARWEE STATION	HANNANS ROAD DEPOT	LIVERWOOD STATION	ISAC STATION	ISAC STATION	ISAC STATION	ISAC STATION	ISAC STATION	ISAC STATION	ISAC STATION	ROSELANDS SHOPPING CENTRE
	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.	a.m.
1												
2												
24	8.10	8.36	8.19	8.22	8.25	8.32	8.35	8.42	8.55	8.58	8.1	8.7
2	8.55	9.41	8.44	8.47	8.50	8.57	9.0	9.7	9.10	9.13	9.16	9.22
2	9.0	9.6	9.9	9.12	9.15	9.22	9.25	9.32	9.35	9.38	9.41	9.47
2	9.50	9.56	9.59	10.2	10.5	10.12	10.15	10.22	10.25	10.28	10.31	10.37
24	10.15	10.21	10.24	10.27	10.30	10.37	10.40	10.47	10.50	10.53	10.56	11.2
2	10.40	10.43	10.49	10.52	10.55	11.2	11.5	11.12	11.15	11.18	11.21	11.27
24	11.5	11.11	11.14	11.17	11.20	11.27	11.30	11.37	11.40	11.45	11.46	11.52
2	11.30	11.36	11.39	11.42	11.45	11.52	11.55	12.2	12.5	12.8	12.11	12.17
24	12.05	12.11	12.14	12.17	12.20	12.27	To Hannans Road Depot.					
2	12.20	12.26	12.29	12.32	12.35	12.42	To Hannans Road Depot.					

ROUTE OF NEW SERVICE

From Lugarno - via Lugarno Parade, Jacaranda Ave., Forest Road, Belmore Road, RIVERWOOD STATION, Belmore Road, Hannans Road, NARWEE STATION, Penshurst Road, King Georges Road, ROSELANDS SHOPPING CENTRE.

From Roselands - Roselands Shopping Centre, King Georges Road, Penshurst Road, NARWEE STATION, Hannans Road, Belmore Road, RIVERWOOD STATION, Belmore Road, Forest Road, Jacaranda Ave., Lugarno Parade.

-oO-

Abbreviations used:-

NS : Denotes DOES NOT PICK UP after Isaac St.

Time Table Commences Monday 25th October 1965

Route 140 Lugarno - Roselands Punchbowl Bus Co.: Monday 25th October 1965

them from Punchbowl to Roselands. The same shift numbers reappear, with 1, 2, 7, 9 and 24 all being found, and one run of the 18 starting at 4.11 at Roselands. Note how there is standing time allowed for through buses in both directions at Punchbowl and Roselands, often, but not always, at both of them, shown in the form 7.51/55 with both arrival and departure times.

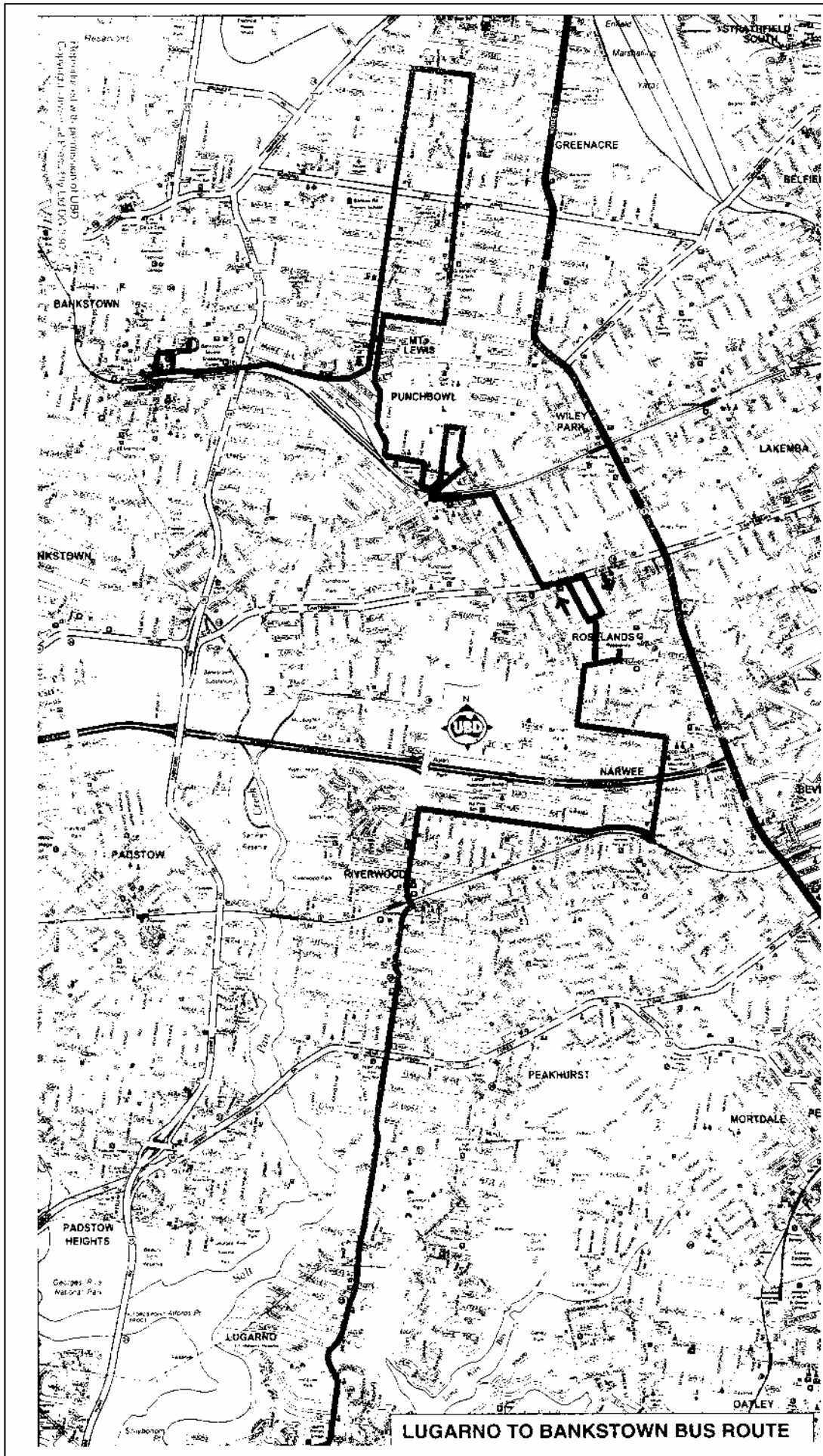
In the early morning and around six in the evening there are no through buses from Bankstown to Lugarno, but the Bankstown buses stop at Punchbowl and the Lugarno buses only start at Riverwood. There is no regular evening service after about 7 p.m., but if you look after the Sundays and Holidays timetable (we still have Good Fridays, but not Christmas Day or Boxing Day), you will find the Thursday night additional services, again divided, this time north or south of Roselands.

ROUTE No 189 BUS TIME-TABLE ROUTE No 189
PUNCHBOWL STATION TO BANKSTOWN STATION
via Greenacre

Bus No.	DEPART PUNCHBOWL STATION	Depart Old Kent Rd & Noble Ave	Depart Greenacre Post Office	Depart Bankstown Station	Depart Bankstown Station	SUNDAYS		HOLIDAYS	
						TO BANKSTOWN	TO PUNCHBOWL	TO BANKSTOWN	TO PUNCHBOWL
MONDAYS TO FRIDAYS									
1	7:34	7:59	8:01	8:15	8:28	8:15	8:25	8:29	8:33
2	7:53	8:28	8:31	8:45	8:57	8:45	8:55	8:59	9:03
3	8:12	8:47	8:49	9:03	9:15	9:03	9:13	9:17	9:21
4	8:31	9:06	9:08	9:22	9:34	9:22	9:32	9:36	9:40
5	8:50	9:25	9:27	9:41	9:53	9:41	9:51	9:55	9:59
6	9:09	9:44	9:46	9:59	10:11	10:00	10:10	10:14	10:18
7	9:28	10:03	10:05	10:19	10:31	10:20	10:30	10:34	10:38
8	9:47	10:22	10:24	10:38	10:50	10:40	10:50	10:54	10:58
9	10:06	10:41	10:43	10:57	11:09	11:00	11:10	11:14	11:18
10	10:25	11:00	11:02	11:16	11:28	11:20	11:30	11:34	11:38
11	10:44	11:19	11:21	11:35	11:47	11:40	11:50	11:54	11:58
12	11:03	11:38	11:40	11:54	12:06	12:00	12:10	12:14	12:18
13	11:22	11:57	11:59	12:13	12:25	12:20	12:30	12:34	12:38
14	11:41	12:16	12:18	12:32	12:44	12:40	12:50	12:54	12:58
15	12:00	12:35	12:37	12:51	13:03	13:00	13:10	13:14	13:18
16	12:19	12:54	12:56	13:10	13:22	13:20	13:30	13:34	13:38
17	12:38	13:13	13:15	13:29	13:41	13:40	13:50	13:54	13:58
18	12:57	13:32	13:34	13:48	14:00	14:00	14:10	14:14	14:18
19	13:16	13:51	13:53	14:07	14:19	14:20	14:30	14:34	14:38
20	13:35	14:10	14:12	14:26	14:38	14:40	14:50	14:54	14:58
21	13:54	14:29	14:31	14:45	14:57	15:00	15:10	15:14	15:18
22	14:13	14:48	14:50	15:04	15:16	15:20	15:30	15:34	15:38
23	14:32	15:07	15:09	15:23	15:35	15:40	15:50	15:54	15:58
24	14:51	15:26	15:28	15:42	15:54	16:00	16:10	16:14	16:18
25	15:10	15:45	15:47	16:01	16:13	16:20	16:30	16:34	16:38
26	15:29	16:04	16:06	16:20	16:32	16:40	16:50	16:54	16:58
27	15:48	16:23	16:25	16:39	16:51	17:00	17:10	17:14	17:18
28	16:07	16:42	16:44	16:58	17:10	17:20	17:30	17:34	17:38
29	16:26	17:01	17:03	17:17	17:29	17:40	17:50	17:54	17:58
30	16:45	17:20	17:22	17:36	17:48	18:00	18:10	18:14	18:18
31	17:04	17:39	17:41	17:55	18:07	18:20	18:30	18:34	18:38
32	17:23	17:58	18:00	18:14	18:26	18:40	18:50	18:54	18:58
33	17:42	18:17	18:19	18:33	18:45	19:00	19:10	19:14	19:18
34	18:01	18:36	18:38	18:52	19:04	19:20	19:30	19:34	19:38
35	18:20	18:55	18:57	19:11	19:23	19:40	19:50	19:54	19:58
36	18:39	19:14	19:16	19:30	19:42	20:00	20:10	20:14	20:18
37	18:58	19:33	19:35	19:49	20:01	20:20	20:30	20:34	20:38
38	19:17	19:52	19:54	20:08	20:20	20:40	20:50	20:54	20:58
39	19:36	20:11	20:13	20:27	20:39	21:00	21:10	21:14	21:18
40	19:55	20:30	20:32	20:46	20:58	21:20	21:30	21:34	21:38
41	20:14	20:49	20:51	21:05	21:17	21:40	21:50	21:54	21:58
42	20:33	21:08	21:10	21:24	21:36	22:00	22:10	22:14	22:18
43	20:52	21:27	21:29	21:43	21:55	22:20	22:30	22:34	22:38
44	21:11	21:46	21:48	22:02	22:14	22:40	22:50	22:54	22:58
45	21:30	22:05	22:07	22:21	22:33	23:00	23:10	23:14	23:18
46	21:49	22:24	22:26	22:40	22:52	23:20	23:30	23:34	23:38
47	22:08	22:43	22:45	22:59	23:11	23:40	23:50	23:54	23:58
48	22:27	23:02	23:04	23:18	23:30	24:00	24:10	24:14	24:18
49	22:46	23:21	23:23	23:37	23:49	24:20	24:30	24:34	24:38
50	23:05	23:40	23:42	23:56	24:08	24:40	24:50	24:54	24:58
51	23:24	23:59	24:01	24:15	24:27	25:00	25:10	25:14	25:18
52	23:43	24:18	24:20	24:34	24:46	25:20	25:30	25:34	25:38
53	24:02	24:37	24:39	24:53	25:05	25:40	25:50	25:54	25:58
54	24:21	24:56	24:58	25:12	25:24	26:00	26:10	26:14	26:18
55	24:40	25:15	25:17	25:31	25:43	26:20	26:30	26:34	26:38
56	25:00	25:35	25:37	25:51	26:03	26:40	26:50	26:54	26:58
57	25:19	25:54	25:56	26:10	26:22	27:00	27:10	27:14	27:18
58	25:38	26:13	26:15	26:29	26:41	27:20	27:30	27:34	27:38
59	25:57	26:32	26:34	26:48	27:00	27:40	27:50	27:54	27:58
60	26:16	26:51	26:53	27:07	27:19	28:00	28:10	28:14	28:18
61	26:35	27:10	27:12	27:26	27:38	28:20	28:30	28:34	28:38
62	26:54	27:29	27:31	27:45	27:57	28:40	28:50	28:54	28:58
63	27:13	27:48	27:50	28:04	28:16	29:00	29:10	29:14	29:18
64	27:32	28:07	28:09	28:23	28:35	29:20	29:30	29:34	29:38
65	27:51	28:26	28:28	28:42	28:54	29:40	29:50	29:54	29:58
66	28:10	28:45	28:47	29:01	29:13	30:00	30:10	30:14	30:18
67	28:29	29:04	29:06	29:20	29:32	30:20	30:30	30:34	30:38
68	28:48	29:23	29:25	29:39	29:51	30:40	30:50	30:54	30:58
69	29:07	29:42	29:44	29:58	30:10	31:00	31:10	31:14	31:18
70	29:26	30:01	30:03	30:17	30:29	31:20	31:30	31:34	31:38
71	29:45	30:20	30:22	30:36	30:48	31:40	31:50	31:54	31:58
72	30:04	30:39	30:41	30:55	31:07	32:00	32:10	32:14	32:18
73	30:23	30:58	31:00	31:14	31:26	32:20	32:30	32:34	32:38
74	30:42	31:17	31:19	31:33	31:45	32:40	32:50	32:54	32:58
75	31:01	31:36	31:38	31:52	32:04	33:00	33:10	33:14	33:18
76	31:20	31:55	31:57	32:11	32:23	33:20	33:30	33:34	33:38
77	31:39	32:14	32:16	32:30	32:42	33:40	33:50	33:54	33:58
78	31:58	32:33	32:35	32:49	33:01	34:00	34:10	34:14	34:18
79	32:17	32:52	32:54	33:08	33:20	34:20	34:30	34:34	34:38
80	32:36	33:11	33:13	33:27	33:39	34:40	34:50	34:54	34:58
81	32:55	33:30	33:32	33:46	33:58	35:00	35:10	35:14	35:18
82	33:14	33:49	33:51	34:05	34:17	35:20	35:30	35:34	35:38
83	33:33	34:08	34:10	34:24	34:36	35:40	35:50	35:54	35:58
84	33:52	34:27	34:29	34:43	34:55	36:00	36:10	36:14	36:18
85	34:11	34:46	34:48	35:02	35:14	36:20	36:30	36:34	36:38
86	34:30	35:05	35:07	35:21	35:33	36:40	36:50	36:54	36:58
87	34:49	35:24	35:26	35:40	35:52	37:00	37:10	37:14	37:18
88	35:08	35:43	35:45	35:59	36:11	37:20	37:30	37:34	37:38
89	35:27	36:02	36:04	36:18	36:30	37:40	37:50	37:54	37:58
90	35:46	36:21	36:23	36:37	36:49	38:00	38:10	38:14	38:18
91	36:05	36:40	36:42	36:56	37:08	38:20	38:30	38:34	38:38
92	36:24	37:00	37:02	37:16	37:28	38:40	38:50	38:54	38:58
93	36:43	37:18	37:20	37:34	37:46	39:00	39:10	39:14	39:18
94	37:02	37:37	37:39	37:53	38:05	39:20	39:30	39:34	39:38
95	37:21	37:56	37:58	38:12	38:24	39:40	39:50	39:54	39:58
96	37:40	38:15	38:17	38:31	38:43	40:00	40:10	40:14	40:18
97	37:59	38:34	38:36	38:50	39:02	40:20	40:30	40:34	40:38
98	38:18	38:53	38:55	39:09	39:21	40:40	40:50	40:54	40:58
99	38:37	39:12	39:14	39:28	39:40	41:00	41:10	41:14	41:18
100	38:56	39:31	39:33	39:47	39:59	41:20	41:30	41:34	41:38
101	39:15	39:50	39:52	40:06	40:18	41:40	41:50	41:54	41:58
102	39:34	40:09	40:11	40:25	40:37	42:00	42:10	42:14	42:18
103	39:53	40:28	40:30	40:44	40:56	42:20	42:30	42:34	42:38
104	40:12	40:47	40:49	41:03	41:15	42:40	42:50	42:54	42:58

LUGAROO.....RIVERWOOD.....PARVEE STATION.....ROSELANDS SHOPPING CENTRE.....PUNCHBOWL STATION.....GREENACRE SHOPPING CENTRE.....BANKSTOWN SQUARE.....SHARVON STN.....

BUS NO	DEPART LUGAROO	DEPART ISAAC BELMORE	DEPART RIVER WOOD STN.	DEPART BONDS KARRARA STN.	DEPART PARVEE STN.	DEPART ROSE LANS CENTRE	DEPART PUNCH BOWL STN.	DEPART OLD KEET MOBLE	DEPART GREEN ACRE	DEPART WATERLOO CARDIGAN ACRE	DEPART BORDIA MOBLE	ARRIVE BANKS TOWN STN.	BUS NO	DEPART BANKS TOWN STN.	DEPART BORDIA MOBLE	DEPART WATERLOO CARDIGAN ACRE	DEPART GREEN ACRE	DEPART OLD KEET MOBLE	DEPART PUNCH BOWL STN.	DEPART ROSE LANS CENTRE	DEPART PARVEE STN.	DEPART BONDS KARRARA STN.	DEPART RIVER WOOD STN.	DEPART ISAAC BELMORE	ARRIVE LUGAROO				
																										TO RIVERWOOD	TO ROSELANDS CENTRE	TO PUNCHBOWL STATION	TO BANKSTOWN
1							5.31		5.38	5.40	5.43	5.19	2	5.50	5.58	5.59	6.01	6.04	6.09			6.05	6.15	6.14	6.19				
2	6.21	6.27	6.30										2	6.22	6.28	6.31	6.33	6.36	6.41					6.21	6.24	6.29			
3							6.04		6.08	6.10	6.13	6.20	7	6.22	6.28	6.31	6.33	6.36	6.41							6.29			
4	6.44	6.48	6.51										2	6.24	6.42	6.45	6.47	6.50	6.55							6.52	6.55	7.00	
5							6.16		6.20	6.22	6.25	6.32	7	6.24	6.42	6.45	6.47	6.50	6.55								7.00		
6	7.02	7.10	7.14										2	7.07	7.14	7.17	7.19	7.23	7.28								7.15	7.18	7.23
7							6.43		6.48	6.50	6.53	7.02	7	7.07	7.14	7.17	7.19	7.23	7.28									7.23	
8							7.00		7.05	7.07	7.10	7.19	8	7.28	7.29	7.32	7.34	7.38	7.43	7.51	7.57	7.59	8.00	8.08	8.12	8.16	8.21		
9							7.15		7.20	7.22	7.25	7.34	8	7.38	7.43	7.45	7.48	7.52	7.57	8.05	8.11	8.13	8.15	8.23	8.27	8.31	8.36		
10							7.31		7.36	7.38	7.41	7.50	9	7.54	8.03	8.06	8.08	8.12	8.20	8.26	8.28	8.30	8.38	8.42	8.46	8.51	8.56		
11							7.58		8.01	8.03	8.06	8.15	9	8.18	8.24	8.27	8.29	8.33	8.41	8.47	8.49	8.51	8.59	9.03	9.07	9.11	9.16		
12	7.23	7.29	7.35	7.40	7.44	7.51/55	8.01		8.08	8.10	8.13	8.22	24	8.24	8.32	8.35	8.37	8.41	8.46/48	8.52/54	8.54	8.57	9.01	9.05	9.11	9.15	9.22		
13	7.50	7.57	8.01	8.05	8.10/17	8.18/20	8.24		8.30	8.32	8.35	8.44	24	8.46	8.53	8.56	8.58	9.02	9.11/15	9.14/16	9.16	9.25	9.29	9.34	9.40	9.50			
14							8.39		8.44	8.46	8.49	8.58	24	8.58	9.06	9.09	9.11	9.15	9.24	9.30	9.32	9.41	9.45	9.51	9.57	10.00			
15							8.56		9.01	9.03	9.06	9.15	24	9.15	9.23	9.26	9.28	9.32	9.41	9.47	9.49	9.58	10.02	10.08	10.14	10.20			
16	8.20	8.24	8.31	8.35	8.39	8.45/47	8.51/53	9.01	9.05	9.07	9.10	9.19	1	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
17	8.32	8.35	8.42	8.46	8.50	8.57/54	9.03/52	9.13	9.17	9.19	9.22	9.31	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
18	8.44	8.48	8.55	8.43	8.45	8.52/54	10.02/53	10.12	10.16	10.18	10.21	10.30	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
19	8.57	9.00	9.07	9.11	9.15	9.21/54	10.02/53	10.22	10.26	10.28	10.31	10.40	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
20	9.10	9.13	9.20	9.24	9.28	9.34/54	10.02/53	10.42	10.46	10.48	10.51	11.00	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
21	9.23	9.26	9.33	9.37	9.41	9.47/54	10.02/53	11.07	11.11	11.13	11.16	11.25	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
22	9.36	9.39	9.46	9.50	9.54	10.00/54	11.07	11.11	11.13	11.16	11.25	11.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
23	9.49	9.52	10.00	10.04	10.08	10.14/54	11.07	11.11	11.13	11.16	11.25	11.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
24	10.02	10.05	10.13	10.17	10.21	10.27/54	11.07	11.11	11.13	11.16	11.25	11.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
25	10.15	10.18	10.26	10.30	10.34	10.40/54	11.07	11.11	11.13	11.16	11.25	11.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
26	10.28	10.31	10.39	10.43	10.47	10.53/54	11.07	11.11	11.13	11.16	11.25	11.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
27	10.41	10.44	10.52	10.56	11.00	11.06/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
28	10.54	10.57	11.05	11.09	11.13	11.19/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
29	11.07	11.10	11.18	11.22	11.26	11.32/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
30	11.20	11.23	11.31	11.35	11.39	11.45/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
31	11.33	11.36	11.44	11.48	11.52	11.58/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
32	11.46	11.49	11.57	12.01	12.05	12.11/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
33	11.59	12.02	12.10	12.14	12.18	12.24/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
34	12.12	12.15	12.23	12.27	12.31	12.37/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
35	12.25	12.28	12.36	12.40	12.44	12.50/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
36	12.38	12.41	12.49	12.53	12.57	13.03/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
37	12.51	12.54	13.02	13.06	13.10	13.16/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
38	13.04	13.07	13.15	13.19	13.23	13.29/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
39	13.17	13.20	13.28	13.32	13.36	13.42/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
40	13.30	13.33	13.41	13.45	13.49	13.55/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
41	13.43	13.46	13.54	13.58	14.02	14.08/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
42	13.56	13.59	14.07	14.11	14.15	14.21/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
43	14.09	14.12	14.20	14.24	14.28	14.34/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
44	14.22	14.25	14.33	14.37	14.41	14.47/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
45	14.35	14.38	14.46	14.50	14.54	15.00/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
46	14.48	14.51	14.59	15.03	15.07	15.13/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	10.34	10.43	10.47	10.51	10.55			
47	15.01	15.04	15.12	15.16	15.20	15.26/54	12.07	12.11	12.13	12.16	12.25	12.34	2	10.27	10.31	10.33	10.36			10.27/33	10.32/38	1							



LUGARNO TO BANKSTOWN BUS ROUTE

Revolution in timetabling (3b): *In Norway, the King allocates train paths in the timetable. GEOFF LAMBERT rounds up the U.K. story and takes a brief look at timetables in the modern European Union.*

THE STORY SO FAR... The Conservative Government privatizes the railways and demands that timetabling be driven above all else by competition policy. The Train Planners of RailTrack bend over backward to accede to its wishes and come a nasty gutser. While they are attempting to pick up the pieces, the Blair Government, opposed to Privatization, comes to power... **NOW READ ON...**

Tinkering with the system

The Labour Government had opposed privatization when in Opposition and had promised to reverse it but, when in Government it found itself unable to do so immediately. It nevertheless gnawed away at Thatcherism around the edges, reckoning that the time of major franchise renewal in 2003/04 represented its best chance for stronger action.

It initially commissioned a White Paper to suggest ways around the impasse. As a consequence OPRAF, the Office of the Passenger Rail Regulator was abolished by legislation and replaced by a *Strategic Rail Authority* in 2001. Like OPRAF, it was the SRA that awarded franchises, although it had no new franchises to award for a couple of years. Part of the conditions for a franchise was the *Passenger Service Requirement*, which had a strong timetable flavour, specifying the level of service provided. The PSR for each TOC outlined the parameters within which it had to design a timetable, specifying service characteristics that were important for passengers. These ensured the provision of a minimum level of service whilst allowing the TOC some freedom to adjust its timetable to respond to passenger needs and to improve efficiency. In advance of starting the process of developing the detail of the timetable, operators were required to consult with the relevant stakeholders on any changes proposed. Prior consultation by the SRA may however take place where service levels had been determined by a relevant Route Utilization or other Strategy.

In the period leading up to the first renewed franchises, the situation



“Where do timetables come from?”

became fluid, with franchisees changing names, buying one another out, or going broke. When franchise renewal time arrived, many were shuffled and many were acquired by other companies. The result is that only 9 franchises still operate in the same way as they did when first awarded. This made the process of timetabling difficult for RailTrack and Network Rail. There is an organisation—the *Association of Train Operating Companies*—that has as one of its briefs the coordination of the interaction between the TOCs and Network Rail, but it is unclear whether this facilitates timetable compilation. (One Clever Dick anagrammed the ATOC’s name to come up with: ‘Repairs, seating incapacitation... home on foot!’, so probably not.)

The history of the implementation of timetabling under privatization suggested that care would need to be taken to implement further changes successfully, particularly as the EU began to require even further separation of infrastructure management from train operation.

RailTrack and Network Rail tinkered endlessly with Section D (*Timetable Change*) of the Track Access Conditions manual. We are lucky that the powers that be have decreed that every version should be publicly available for us to see the evolution in progress. First to go was the requirements for 6 new passenger timetables per year. Six was too many and too hard. Two was adequate and all that the TOCs could handle. There was still allow-

ance for 6 new Working Timetables per year—presumably to keep the freight operators happy, although the role of the freight companies in the process was always far from clear. For the next couple of timetables considerable juggling of the bid and offer time scales took place, at least partly imposed by the Office of the Rail Regulator. The total time for planning was reduced from 48 weeks (effectively a year) to 28 or 29 weeks. There would still be an overlap because the Winter timetable still took effect only about 16 weeks after the Summer timetable.

For the nearly four years from the Summer 1997 Timetable to the Winter 1999 Timetable, the system for each of the two timetables settled down to two identical 12 week bidding cycles, with 4 weeks for bids, while RailTrack allowed itself 8 weeks to juggle the bids before returning the finished product to the TOCs. For the Summer 2000 timetable, the system was further streamlined to condense the Summer and Winter Timetables into a single bidding cycle and each cycle was reduced to one iteration with 3 weeks for bids and 5 weeks for RailTrack to finalise and ‘offer’ back a completed Timetable. By this process the timetable planning period had been condensed from the original 48 weeks to only 8. It could only work where timetable change was small and gradual.

By 2002, the principles of Thatcherism had been incorporated into European Union legislation and this decreed that there had to be **three** Public Timetables per year—one for Summer and two for Winter (May, September, December). So this system was changed again briefly to accommodate this, although there was still only one cycle and it had only one iteration. TOC bids had to consist of three separate timetables, although in practice the two Winter timetables were usually identical.

In the midst of all this was the Hatfield accident, found to be the result of RailTrack’s negligence in track maintenance and monitoring. This resulted in nation-wide slowing of trains and total timetable chaos. RailTrack, by now itself privatized but never very solvent, collapsed into bankruptcy as a result. Government bailed it out by returning it to Government ownership under the banner of *Network Rail*, effective from. Network Rail is

owned by its members but run by a PLC-style board. The membership group is drawn from a wide range of industry partners and interested parties, including members of the public. Members have clearly defined and limited powers; they do not run the company. However, the board is directly accountable to Network Rail’s members who oversee the conduct of the business. Network Rail receives part of its income in the form of grants issued by the SRA and the other part is through the track access charges paid by the TOCs and FOCs for the train paths provided.

At first, Network Rail was constrained by the processes in motion to persist with RailTrack’s timetabling process, but it soon began to make noises about changing them. In July 2003, it foreshadowed that, from the Summer 2004 timetable, the old process would be thrown out and replaced with a different animal altogether. The business of drawing up the timetable was to be taken away from the TOCs and would be handled entirely by Network Rail on a single year-long cycle:

- Preliminary period 10 weeks
- Drafting period 16 weeks
- Finalization Period 6 weeks
- Supplemental Period 22 weeks

The Supplemental Period consisted of an Appeal Period, and what I call here a Revision Period, a Revision Offer Period, a Revision Response Period and the remaining time which would be of about 6, 2, 1 and 11 weeks in duration.

What the TOC’s got for their money out of this process was a clutch of timetable ‘slots’, which duly appeared in the WTT, but there was no obligation for the companies to run all of the trains they had bid for and been awarded. The process contained provisions for ‘spot bids’ and ‘flexing’, whereby TOCs could poach each other’s timetable slots, especially for special events or during holidays. ORR suggested that the process incorporate a new section (Section J) into the *Network Access Agreement* (by now transformed into the *Network Code*) to be known as the *Use It Or Lose It* or UIOLI clauses. UIOLI was a new principle for the Railways but was an old principle of Thatcherism, firmly rooted in competition policy. Effectively it meant that unused slots in the timetable could be taken away from the owning TOC and given to someone else.

The Timetable Conference

The process for substantive annual change starts many months in advance, but culminates at a National Timetable Conference where all Operators meet Network Rail and make their formal bids for the timetables they wish to operate. The time between the Conference (February) and the introduction of the timetable (December) is taken to refine the detail, to resolve any conflicts that may exist and to prepare the National Rail Timetable (NRT). Operators at this point, just prior to introduction of the new timetable, are obliged to publish localised booklets and posters covering the areas over which they operate. Finally the SRA checks to ensure that every operator has complied with its PSR or SLC.

The SRA subsequently developed a new franchise model, which tightened the specification of the services to be operated by replacing the PSR with more detailed *Service Level Commitments* (SLC). The minimum level of service that must be provided by the franchisee is in effect the level of service that it must seek train slots for in the annual Network Rail timetabling exercise. Draft service level commitments are usually based on the current timetable. The franchisee may only operate a service different from that specified in the service level commitments with the approval of the SRA. The SRA can specify its service level commitment on a timetable by timetable basis in such detail as it decides and may issue a new service level commitment each year if a new timetable requires one.

For each service, the draft service level commitments include the intervals at all times of day, the times of early and late services, maximum journey times, and stopping patterns. They also specify a minimum number of seats for services. The franchisee has to use its endeavours to prepare a plan that meets target passenger demand and provides passengers with the reasonable expectation of a seat within 10 minutes of boarding.

A train running regime provides financial rewards and penalties related to the franchisee in respect of cancellations, capacity and service delivery. Poor performance produces financial penalties and can lead to remedial plans, and then to breach and ultimately default under the franchise agree-

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One half of a double-page spread, bled across the centreline here

The Future of Rail



July 2004

ment. Requirements for 39 detailed aspects of service quality are set out in the service quality incentive regime (SQUIRE). Rewards and penalties for success or failure to achieve service benchmarks will be calculated according to a points system. If the franchisee fails to achieve service benchmarks, it can be penalized until the failure is remedied. Persistent failure results in a remedial plan and can lead to a breach and ultimately default under the franchise agreement.

The SRA gives the franchisee little flexibility about the service it is expected to operate. The franchisee's freedom might consider adding further services in certain limited circumstances (such as special events that were not contemplated when the franchise was awarded) it is normally constrained to operate only the services in the service level commitment. All significant aspects of service quality can only be reduced at the risk of incurring penalties. Consequently, unless genuine efficiency improvements can be made, the franchisee will

find it difficult to increase profits by economizing on the level or quality of rail services.

The Future of Rail

The railway industry's troubles did not go away in the years after the fall of RailTrack and its replacement by Network Rail. In response, in mid-2004, the Government brought forth another White Paper—*The Future for Rail*—which made a number of wide ranging recommendations which were turned into reality by a new Railways Act early this year. Chief among these was the abolition of the Strategic Rail Authority and the return of many of its functions to a Government Department for Transport. For timetables, the major change has been the removal from the Train Operation Companies of their input to timetable drafting. Network Rail will now be the sole designer of timetables, although it is enjoined to 'consult' with the TOCs. It will then sell the resulting paths to the highest bidder. This scheme is more like that

adopted in France and Germany, which have used it from the outset. It has not been well-received by the TOCs or the railway press. As mentioned above, Network Rail had already begun adopting this process in 2003, from which time the Network Code had contained two alternative methods of compiling the timetable.

But things are never static: the following twists have been added to the train planning process:

Network Management Statement

The Network Management Statement (which existed in RailTrack days) is produced in accordance with the requirement in Network Rail's Network Licence, to describe its maintenance, renewal and enhancement plans for the benefit of train operator customers and other rail industry stakeholders.

The work plans described in the two volumes of the NMS are compiled from Network Rail's **Business Plan**. The first volume describes plans at a national, network wide level, and volume 2 disaggregates the plans to the 45 strategic routes. The business plan has been developed for first year and the three subsequent years

Network Statement

This is a scaled-down version of the Network Code, Rules of the Plan and Rules of the Route, meant to apply to International train operators purchasing train paths in accordance with EU Directives. It conforms with EU standards, which are more fully described in the following section.

Network Rail Technical Plan

The Technical Plan is produced in accordance with Network Rail's network licence condition and is one of a suite of three documents that will be published on an annual basis. In the Technical Plan, Network Rail sets out how it intends to achieve its network stewardship objectives through the safe and efficient day-to-day operation of the network, and the asset maintenance and renewal activities that underpin the delivery of the train services. It is designed to:

- provide the Office of the Rail Regulator with details of how Network Rail intends to deliver our network stewardship obligations;
- enable providers and potential providers of services relating to railways to plan their business;

- enable funders and potential funders of services relating to railways to plan their future financial and service requirements.

Network Rail Route Plan

This sets out Network Rail's route plans. It was developed to show in more detail how the strategies set out in the Technical Plan will be delivered at a route level across the network, and how Network Rail works with the SRA and other stakeholders to improve the utilisation and performance of the network. It also shows a portfolio of activities to develop the network.

The Railway Operational Code

The Railway Operational Code (ROC) is to be established under

Condition HA, which became part of the Network Code, from 10 January 2005, subject to notice from ORR bringing it into full effect. Network Rail and each Train Operator shall comply with the Railway Operational Code.

The objective of the ROC is to sustain and, where necessary, restore expeditiously the operation of services in accordance with the Working Timetable in a manner consistent with the ORR ROC Criteria, having regard to:

- a) the needs of passengers and freight customers;
- b) the interests of safety and security; and
- c) the efficient and economical operation of the network and of trains operating on it.

Suspension of the WTT

In April 2005, ORR proposed a new section of the Network Code—'emergency WTT replacement'. This will cover emergency situations that last for some time (the Hatfield accident and the infamous Penmanshiel tunnel collapse come to mind), where major changes are necessary. There are complex rules for the introduction, termination or indefinite prolongation of emergency WTT working. Key principles are that of majority voting by the TOCs about whether to do any of these things and dispute-resolution processes in case they can't agree.

Train timetabling in the European Union

Today's *European Union* was formerly known as the *European Economic Community* and, before that, as the *Common Market*—the great British bogeyman of the 1960s. The earliest name best reflects its purpose—money. As originally conceived, this 'Federation' was oriented towards the loosening of inter-European trade barriers but has more and more assumed the role of telling member countries how to run their internal affairs. The Union was established by The Treaty of Rome in 1957 and modified and extended by the Treaties of Maastricht, Amsterdam and Nice in 1992, 1997 and 2001. Membership has expanded from the original 6 countries to 25. Central to our considerations here is Article 75 of these treaties, which specifies freedom and competitiveness of transport. The EU has a Parliament, a Court and a Council—it is the latter body which issues Directives (makes rules) about how transport is to be arranged in practice and how train plans are made. Member states must follow these Directives and, where necessary, introduce national legislation to give effect to them. As mentioned in the previous installment, the first country to break the vertical integration of its railway system was Sweden in 1993 and its experience helped frame many EU Council Directives.

Charlemagne (800 A.D.) was aware of the importance of an efficient transport network to control a territory that was strikingly similar to the contours of the lands of the founding six Member States of the

EU. Apart from building roads and a bridge over the Rhine, he tried to link the Rhine and the Danube. When the EU was created, transport was again considered crucial for integration. From the outset, Member States laid down the principles for developing a common transport policy in the Treaty of Rome. However, while having agreed on the principle, unlike Charlemagne, governments were not prepared to take concrete steps. Legislative measures finally got under way 30 years later—and only after the Court of Justice had condemned the Council of Ministers for its inaction.

Train planning (timetabling) has emerged as one of the major foci of this 'control'. Most influential of the EU Council Directives was No. 91/440 which stated:

The aim of this Directive is to facilitate the adoption of the Community railways to the needs of the Single Market and to increase their efficiency by;

- *Ensuring the management independence of railway undertakings;*
- *Separating the management of railway operation and infrastructure from the provision of railway transport services, separation of accounts being compulsory and organizational or institutional separation being optional,*
- *Improving the financial structure of undertakings,*
- *Ensuring access to the networks of Member states for international groupings of railway undertakings and for railway undertakings*

engaged in the international transport of goods.

Points to particularly note are the requirement of vertical separation and the specification that access to a country's rail infrastructure was only mandatory for international rail transport. The Directive was subsequently modified by 5 further Directives in 1995 and 2001 '*in the light of experience*'. Among other things, these modifications included the following relevant to train planning

- Rail operators must be issued with a licence
- Rules for allocation of infrastructure (train paths) should be consistent country-to-country
- Establishment of a defined freight network, the Trans-European Rail Freight Network (TERFN)
- Member countries may extend Open Access rights to other than International carriers
- Infrastructure managers must be independent of the State
- Urban, suburban and regional railways can be excused from the Directives
- Accounting for Passenger operations and freight operations must be separate (referred to as horizontal separation)
- There must be a 'Network Statement' setting out full details of the infrastructure and timetabling principles
- New working timetables must be introduced in May each year (later changed to December).

EU Directives 91/440, 95/18 and

RailNet Europe – products and services

Rail Net Europe

Core product: train paths on international corridors



- RNE customers have access to 24 rail infrastructure managers in a single point (OSS)
- RailNetEurope partners serve a network of 199,750 km railway infrastructure connecting all important European Hubs and including a ferry line on Baltic Sea
- RailNetEurope offers diversified train paths:
 - “on the shelf” train paths catalogue (covering around 14,500 km)
 - “Tailor made” train paths

Map TERFN + pre-constructed train paths 2005

95/19 specify the necessity for separate accounting of infrastructure and operations as the minimum reform; the directives do not actually specify splitting infrastructure and operations into two or more separate business entities. Consequently, Member States have adopted two basic methods to achieve the required minimum: Institutional separation and Organizational separation.

Institutional separation. This method separates the infrastructure owner and railway operators into autonomous entities with separate capitalization, balance sheets and staff. The infrastructure owner can be publicly or privately owned. Even when the infrastructure owner is publicly owned, it must still operate according to the normal rules and laws regulating private businesses. A government-appointed regulator mediates disputes between the infrastructure owner and railway operators. Rail-track in the UK was the only example of a genuinely privatized infrastructure owner. However, its troubles suggest that private ownership of railway infrastructure is not necessarily a good idea.

France falls into this category in that RFF and SNCF are completely separate legal entities with separate staff, but the relationship is close because SNCF actually operates and maintains the infrastructure based on contracts awarded from RFF. In Finland, the infrastructure manager is the Finnish Rail Administration (RHK), a department of the Ministry of Transport and Communications. So far, it seems that the French and Finnish models have avoided the problems of the UK model.

Organizational separation This creates separate business units with a large degree of operational freedom. There are 2 basic patterns:

- Business units operating as part of railway operator. The units have an independent management and a separate balance sheet but no legal autonomy.
- Autonomous business units organized within framework of a holding firm—used in Germany.

Whether institutionally or organizationally separated, the Infrastructure owner is usually the body which does the train planning and draws up the timetables and sells them to the train operators by methods summarised in the centre spread table. In most countries there is also an industry regulator which lays down rules about how the industry operates, including rules about timetables. This body may actually issue licences to operators, but this task can also be carried out by a franchising body, which may itself lay down rules about timetable attributes (e.g. minimum service levels).

Despite some early experimentation, as in Britain, with allowing Railway Undertakings (RUs, or TOCS-train operating companies) to construct their own timetables and seek approval for them from the Infrastructure manager, timetabling nowadays is solely in the hands of the Infrastructure Providers. They should, of course, be cognizant of what their customers would like to operate—this is mostly manifested in the practice of producing new timetables by modification of the old, rather than a complete re-cast. The exception was Switzerland in December 2004, but here Open Access does

not really prevail and bringing in a completely new timetable was not a big obstacle. The methods by which RUs obtain train paths for their operations varies from country to country, in some they are bought “off-the-shelf” as it were and in some they are (or were) bid for at a competitive auction

As mentioned the Treaty and the Directives were focussed on international trade and the freedom of RUs to operate trains in other peoples’ countries. This still remains the core of the Directive, and thus nearly all countries offer Open Access to international train operators. Many offer it also to domestic carriers—this is specifically allowed by the Directives, but not mandated.

One-stop shops and TERFN

The mandatory Open Access requirements for international operators—especially freight operators—led eventually to the birth of an organisation *RailNet Europe (RNE)*, which formalised the setting up of *one-stop shops* to sell train paths on the *Trans European Rail Freight Network— TERFN*.

RNE is a rail infrastructure managers’ organisation, officially established in January 2004 as an association based in Vienna for facilitating traffic on European rail infrastructure. Twenty six Rail Infrastructure Managers from 23 countries are full members of RNE.

RNE partners serve a network of around 215,000 km railway infrastructure. The ‘target groups’ for of RNE are *Railway Undertakings* and *Authorised Applicants*. As at March 2005, RNE serves around 450 European customers, around 120 of them being international business. RNE states its objectives as being:

- To promote European rail transport and increase rail traffic on the European rail network.
- To enable easy and fast access to European Railway Infrastructure.
- To enhance quality and raise efficiency of cross-border traffic.

The main approach is to improve operational issues of international rail traffic. RNE and its members act as a single European Rail Infrastructure Company within the field of international rail traffic. Customers buy pre-constructed international train paths for freight on the main international lines. These can be booked on very short notice

As of 12-May-2005		Great Britain - Eurotunnel - / Le Havre - Metz Saarbrücken / Rotterdam - Nürnberg - Wien					
Speed: 100 km/h							
Path No.		40301/3		40401			
Trailing load max. (t)		1200		1200			
brake effort (P) min.		75%		75%			
Loading gauge P/C		45/375		45/375			
train length max.		700 m		600 m			
Mossend	d			12.50			
	a			21.19			
London-Wembley	d			22.20			
	a			00.39			
Dollands Moor	d			03.33			
	a			05.28			
Calais-Fréthun	d			05.21			
Le Havre	d	16.44					
	a	17.14					
Bréaute-Beuzeville	d	17.32					
	a	18.03					
Motteville	d	18.13					
	a	20.56					
Amiens	d	21.02					
	a	22.34					
Somain	d	22.44					
	a						
Valenciennes	d			07.42			
	a						
Aulnoye	d						
	a	01.01		09.33			
Mohon	d	01.03		09.35			
	a	02.47					
Conflans-Jarny	d	02.48					
	a						
Thionville	d						
	a			11.21			
Uckange	d			11.58			
	a						
Metz	d	03.39		12.23			
	a	04.30		13.25			
Forbach	d	04.54		13.41			
	a						
Saarbrücken Rbf	a	05.08		13.56			
Saarbrücken Rbf	d	05.34		15.05			
	a	08.19		17.06			
Ludwigshafen/Rh.	d	08.29		17.08			
Worms	d	09.07		17.32			
Darmstadt Nord	d						
	a						
Darmstadt-Kranichstein	d	10.12		14.27	20.04		
Aschaffenburg	a	11.59		15.00		22:25	05:01
Path No.		45941		45943			
Aschaffenburg	d	12.06	18.26	15.10	20.32	22:28	05:20
	a			16.05	21.27	23.44	
Gemünden	d	12.53	19.37	17.26		00.09	06.09
	a	13.30				00.53	07.10
Schweinfurt	d	14.33				01.01	07.13
	a		20.05	17.54			
Würzburg-Zell	d		20.12	18.19			

at RNE's *One Stop Shops*.

The One-Stop-Shops (OSS) provide a spectrum of consulting, co-ordination and sales services, before, during and after the train journey. This includes, for example, assistance to the customer on traffic planning, international co-ordination of tailor-made train paths, information on the level of infrastructure charges, assistance in choosing partners for the transport chain, statistics and quality monitoring.

One-Stop-Shop Sales System promotes itself as having:

- One-face-to the customer

- Improved customer information
- Improved response times
- Consulting services
- Access contracts

Operators can walk into a OSS anywhere in Europe and buy a train path in another country off the shelf. An example of what is on the shelf appears above. There is even a OSS web-site, with its now-familiar 'Add to Shopping Cart' icons. Timetables were never easier.

The Network Statement

Core of the train planning process in the EU is the Network Statement, which is supposed to be

available in English as well as the local language and must be freely available on the Web It must contain.

1. A section setting out the nature of the infrastructure which is available to railway undertakings and the conditions of access to it.

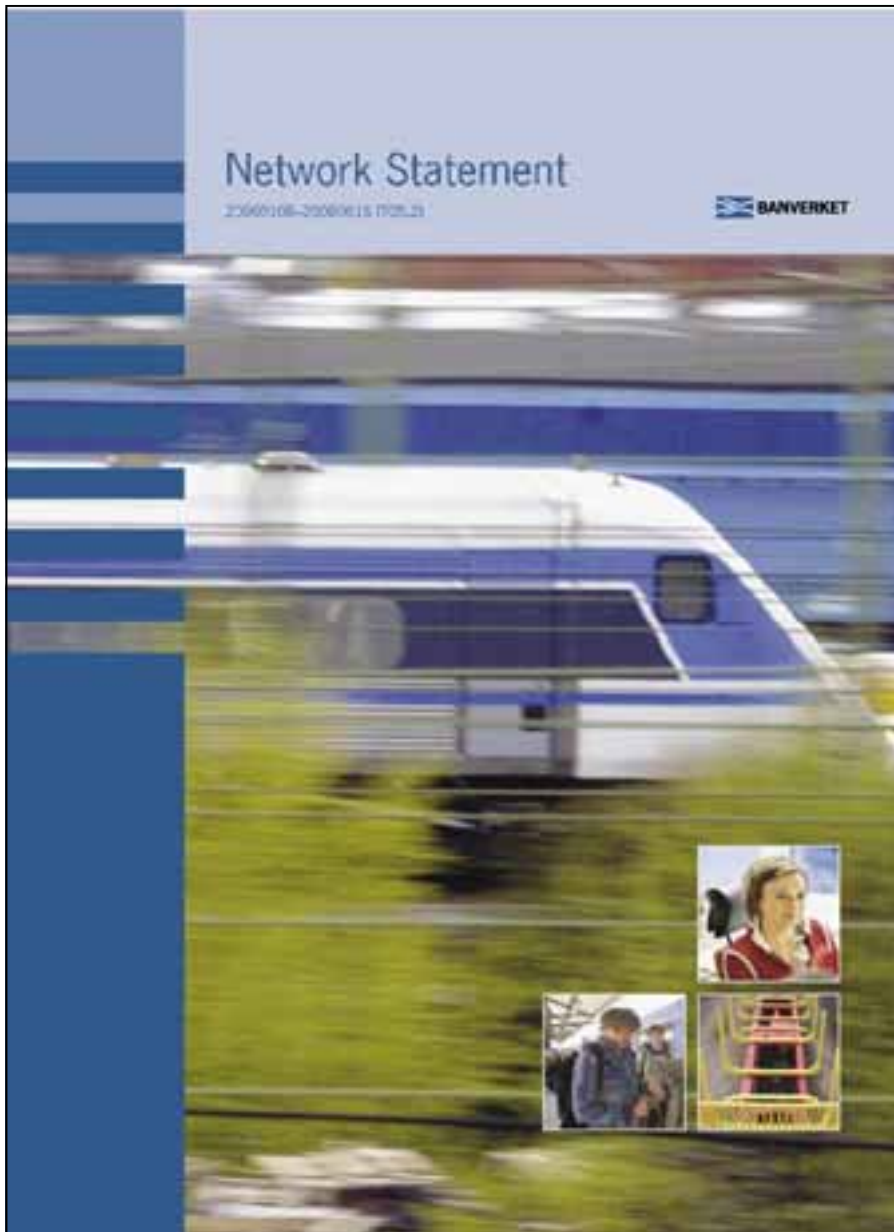
2. A section on charging principles and tariffs. This shall contain appropriate details of the charging scheme as well as sufficient information on charges that apply to the services listed in Annex II which are provided by only one supplier. It shall detail the methodology, rules and, where applicable, scales used for the application of Article 7(4) and (5) and Articles S and 9. It shall contain information on changes in charges already decided upon or foreseen.

3. A section on the principles and criteria for capacity allocation. This shall set out the general capacity characteristics of the infrastructure which is available to railway undertakings and any restrictions relating to its use, including likely capacity requirements for maintenance. It shall also specify the procedures and deadlines which relate to the capacity allocation process. It must contain specific criteria which are employed during that process, in particular:

- the procedures according to which applicants may request capacity from the infrastructure manager;
- the requirements governing applicants;
- the schedule for the application and allocation processes;
- the principles governing the co-ordination process;
- the procedures which shall be followed and criteria used where infrastructure is congested;
- details of restrictions on the use of infrastructure;
- any conditions by which account is taken of previous levels of utilisation of capacity in determining priorities for the allocation process.

It details the measures taken to ensure the adequate treatment of freight services, international services and requests subject to the *ad hoc* procedure.

The Network Statement is often what an timetable collector would probably call a timetable "Appendix", but looked at from a customer's perspective instead of that of the operator. It contains both infrastructural details and



details of which of them are supplied with the path: these include:

1. The minimum access package shall comprise:

- a) handling of requests for infrastructure capacity;
- b) the right to utilise capacity which is granted;
- c) use of running track points and junctions;
- d) train control including signalling, regulation, dispatching and the communication and provision of information on train movement;
- e) all other information required to implement or operate the service for which capacity has been granted.

2. Track access to services facilities and supply of services shall comprise:

- a) use of electrical supply equipment for traction current;

- b) refuelling facilities;
- c) passenger stations, their buildings and other facilities;
- d) freight terminals;
- e) marshalling yards;
- f) train formation facilities;
- g) storage sidings;
- h) maintenance and other technical facilities.

3. Additional services may comprise:

- a) traction current;
- b) pre-heating of passenger trains;
- c) supply of fuel, shunting, and all other services provided at the access services facilities mentioned above;
- d) tailor-made contracts for: control of transport of dangerous goods, assistance in running abnormal trains.

4. Ancillary services may comprise:

- a) access to telecommunication network;
- b) provision of supplementary information;
- c) inspection of rolling stock.

Schedule for allocation process:

1. The working timetable shall be established once each year.
2. The change of working timetable shall take place at midnight on the last Saturday in May. Where a change or adjustment is carried out after the summer it shall take place at midnight on the last Saturday in September each year and at such other intervals between these dates as are required. Infrastructure Managers may agree on different dates and in this case they shall inform the Commission thereof
3. The final date for receipt of requests for capacity to be incorporated into the working timetable shall be no more than 12 months in advance of the entry into force of the working timetable.
4. No later than 11 months before the working timetable comes into force, the Infrastructure Managers shall ensure that provisional international train paths have been established in cooperation with other relevant allocation bodies as set out in Article 15. Infrastructure Managers shall ensure that as far as possible these are adhered to during the subsequent processes.
5. No later than four months after the deadline for submission of bids by applicants, the Infrastructure Manager shall prepare a draft timetable.

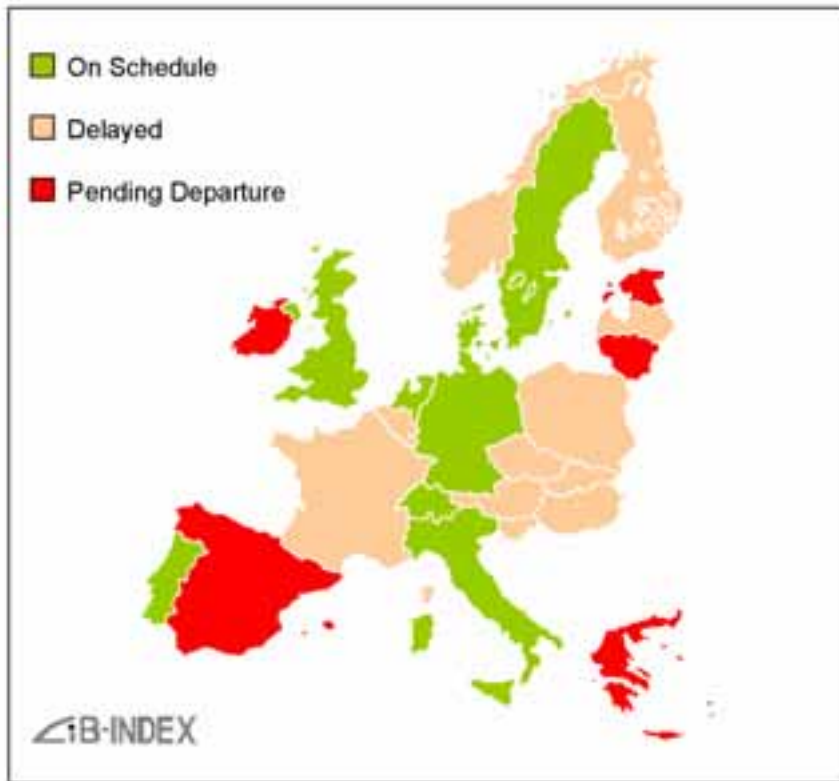
Train path charges

Except in The Netherlands, train paths cost money. They are charged for because (of course) the infrastructure provider is supposed to be profitable. In practice, many aren't and receive a Government subsidy to make up the difference. The full cost of a train path would, in most instances bankrupt the Railway Undertakings so they too usually receive a subsidy from central Government- especially the passenger operators. Although, under the EU Directives, all of this financial juggling is expected to be clear, equitable and consistent; in practice it is not.

The Access Index for EU railway systems

The obsessive Germans—in particular IBM Germany—have made

Geographical Distribution of Market Opening



an in-depth study of the progress in 'rail liberalisation' and publish a report on it every two years- two so far in 2002 and 2004. These reports, which contain a mass of data obtained by survey of rail operators, contain a scoring and rating system that assesses each country on the basis of three broad categories of Legislation, Access and Competition. Each of these categories consists of a multitude of sub-categories, a number of which are specific to train planning issues. The scores are numerical- the maximum possible score for the entire 'Lib Index' is 1000 any for the many sub-categories, I have recalculated all of them as percentages. The table in the centre-spread shows the overall Access score and the 'train path entry' score, which measures how easy it is for a train operator to acquire a path in the Working Timetable (higher is better). IBM rates countries as '**On Schedule**' (60% - 100%), '**Delayed**' (30% - 60%) or '**Awaiting Departure**' (0% - 30%) according to their Liberalisation Index scores and publishes a handy map of this (above). The information below is taken from the 2004 report and the scores are in the Table on pp 12-13. The many abbreviations below are explained in footnotes to the table.

Austria

ÖBB is wholly owned by the state and organised as an integrated railway undertaking with separate accounting for infrastructure and transport. Train path access is granted by the infrastructure sector of ÖBB, which will in future be represented by ÖBB Infrastruktur Betrieb AG. There is a uniform, single-tier train path pricing system. Under new legislation, there will be allocation of infrastructure capacities to third parties, regulations for capacity bottlenecks. It will longer contains provisions for the auction of train paths.

Belgium

Since 1991 SNCB has been independent of the state in terms of assets, budget planning and accounting. The freight and passenger transport divisions are not yet separate. Foreign passenger train operating companies have access rights only as part of international groupings. SNCB and the Ministry of Transport decide individually on contracts for cross-border transport. At present, such contracts have been signed with DB AG, CFL, NSR and Railion. Although it is possible to create a Belgian RU, the domestic market is not open to SNCB competitors. It took the only active Belgian RU apart from SNCB two years to obtain all the necessary certificates

Czech Republic

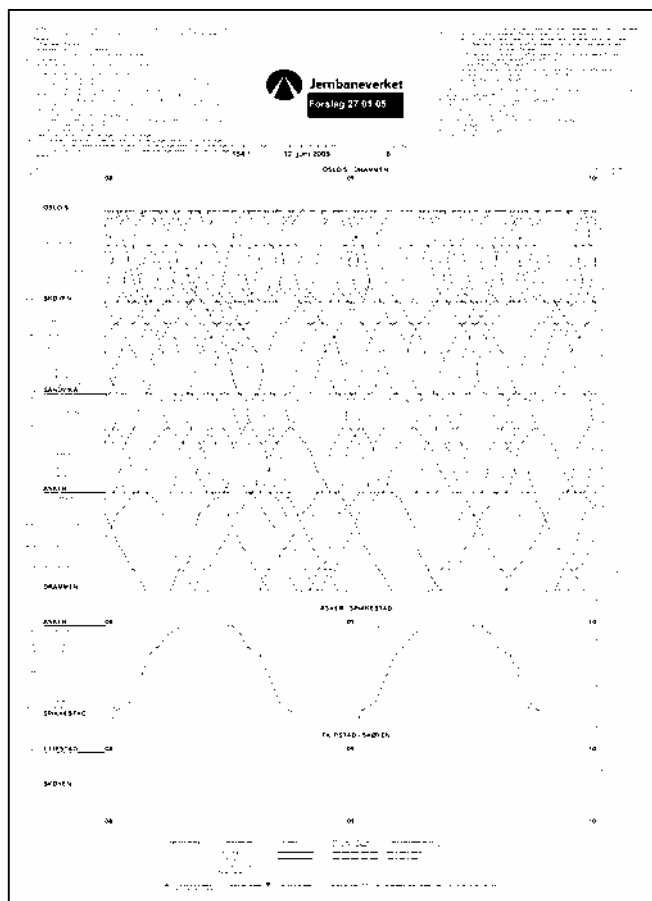
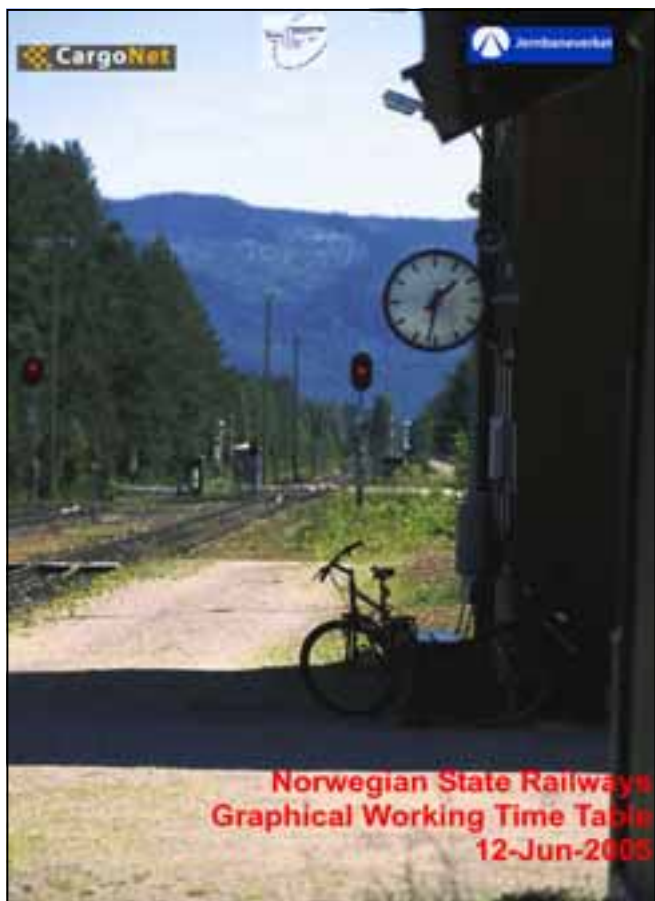
In 2003, ČD - Czech Railways joint stock company- was established. The state holds all of the shares in the company. On the basis of a 3-year contract with SZDC, the Czech Railway Infrastructure Administration, the infrastructure management responsibilities were delegated to ČD, which is also the main railway transport operator. Open access is granted for international groupings and combined transport for as freight. Open access applies to international passenger operators. Train path allocation rules will be defined in a future Network Statement. A railway undertaking must apply for capacity allocation at least 12 months before the annual schedule, but there is also an *ad hoc* procedure for capacity allocation. The current train path allocation process is not very detailed. The new process is supposed to be published in a more transparent way in the upcoming network statement.

Denmark

In 1997, infrastructure management was separated from the provision of transport services and transferred to Banedanmark, fully owned by the state and responsible to the Danish Ministry of Transport. Transport services are provided by DSB, which is an independent company, wholly owned by the Danish Ministry of Transport. In 2001, DSB sold off its freight segment, to Railion Denmark. Foreign RUs have transit and access rights for both freight and passenger transport. Domestic rail freight companies also have access to the network; in the passenger sector, access is governed by transportation contracts.

Estonia

The Estonian railway network consists of two part-networks in private ownership Eesti Raudtee and Edelaraudtee. Both also are train operators: Eesti Raudtee- freight, and Edelaraudtee- passenger. Thus it is completely privatised and is simultaneously fully integrated, and therefore totally independent of the state. Foreign RUs without an Estonian licence can only use railway infrastructure within the scope of bilateral agreements or if they enter into corresponding agreements with private Infrastructure Managers. According to the Railway Act currently in force, at least 20 per cent of the



total train paths available for domestic RUs per allocation period must be put up for new contract award in public tender procedures by the Infrastructure Managers. At the discretion of the Infrastructure Manager, train paths can be awarded to the RUs for a period of between one and three years.

Finland

In 1995, infrastructure and transport were separated in terms of ownership in Finland. Infrastructure is managed by RHK and transport operations by VR Group, which is the only domestic RU on the RHK network. VR business units of freight and passenger transport have separate accounting. Foreign RUs wishing to offer international transport services have open access, but there is no opportunity of setting up a local RU in Finland with the option of access to the national railway network.

France

State-owned SNCF is the sole provider of transport services. The Infrastructure Manager RFF, also state-owned, is separate from SNCF in terms of ownership rights. However, SNCF and RFF have signed a contract for services which specifies that SNCF is also

responsible for infrastructure maintenance and plays a decisive role in the allocation of train paths. TERFN has been implemented and EU licences are recognised. However, there is as yet no market access for RUs with a national licence.

Germany

Germany offers open access in the freight and long-distance passenger market to all RUs with a domestic licence. RUs have to provide freight and long-distance passenger transport. Open access is also possible in the short-distance passenger sector, although in practice the fare revenues do not cover the costs, so that no RU actually makes use of open access. In addition to access rights, foreign RUs also have the right to open access on a reciprocity basis. Implementation of the already defined TERFN routes is in preparation. Deutsche Bahn AG is a privatised railway company which is integrated under the umbrella of a holding. It is still wholly state-owned, but provides transport and infrastructure services according to commercial criteria. The infrastructure (DB Netz AG and DB Station & Services AG) and transport divisions of DB AG are separate in terms of legal status, organisation and account-

ing. Train path allocation is effected by DB Netz AG in accordance with uniform and transparent criteria for all RUs.

Greece

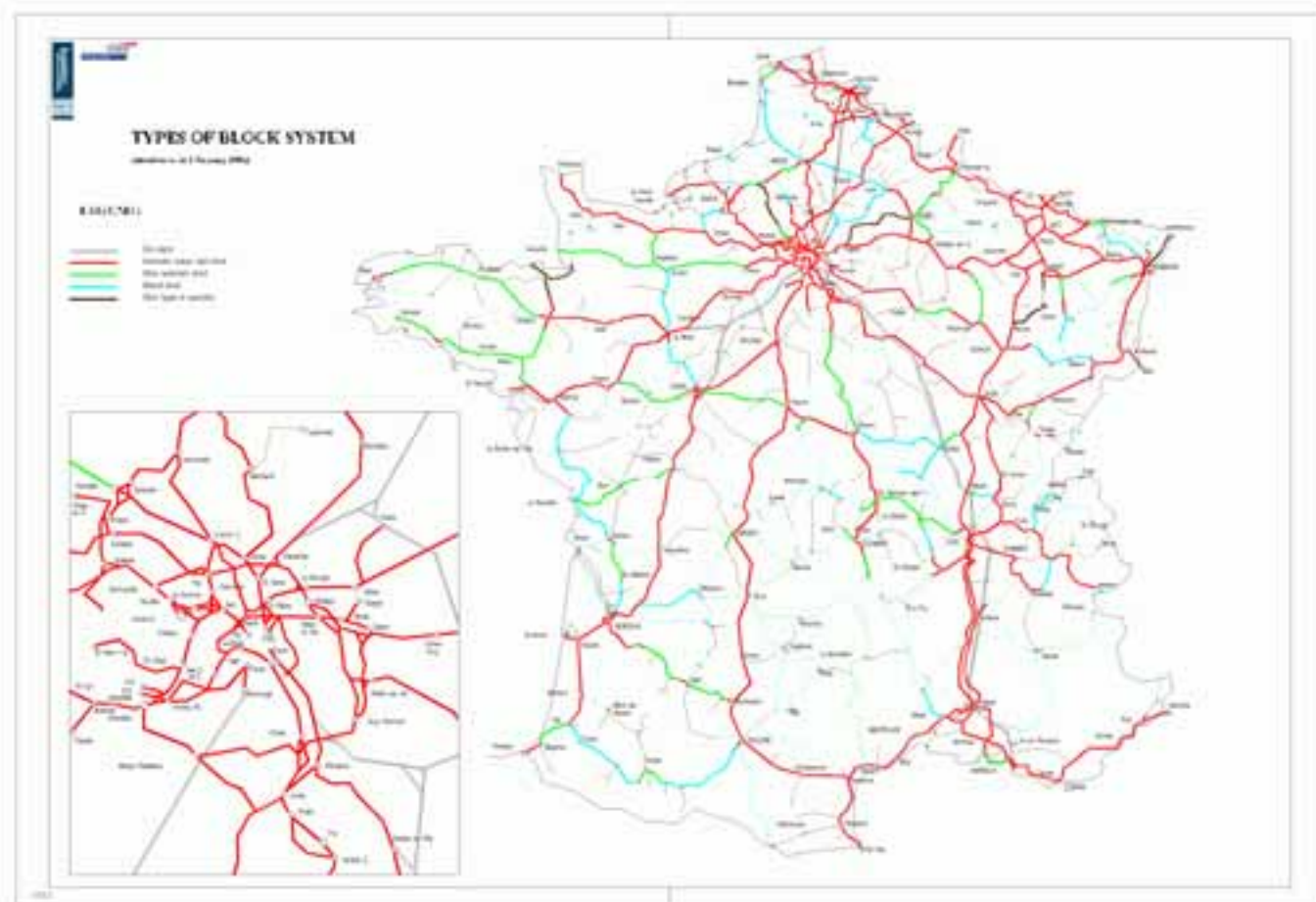
In Greece, infrastructure management and the provision of transport services have not yet been separated, and both are currently handled by the state-owned railway OSE. New legislation, however, is expected to include the separation of infrastructure and transport.

Hungary

Hungary has a horizontally-integrated railway undertaking, i.e. passenger and freight transport and infrastructure management-MAV. According to the Hungarian Transport Ministry, market entry of foreign RUs is regulated by rules similar to Open Access based on reciprocity. TERFN routes are defined by the Agreement on Hungary's Accession to the EU. National freight RUs have Open Access to the Hungarian market. The passenger market is partially closed and partially accessible through transport contracts.

Ireland

While Ireland has prepared the legal framework to comply with EU Directives, implementation has not



yet taken place. The incumbent Iarnrod Eireann is a subsidiary of the state-owned statutory corporation CIE and is partially funded by a government subsidy. Iarnrod Eireann owns and operates the state infrastructure but separate accounts are maintained for infrastructure management and operations. According to the Department of Transport, it is theoretically possible to establish a new railway undertaking in Ireland, but to date there have been no requests.

Italy

Italy is undertaking steps towards implementing the EU specifications. There are legal provisions to safeguard the independence of the Infrastructure Manager RFI from the transport provider Trenitalia. However, both companies belong to the holding company FS. Foreign freight operating companies have market access to the entire national network for international freight transport. An open access regime also applies to all foreign passenger TOCs. Italian RUs enjoy legally guaranteed open access in long-distance passenger and freight transport. Short-distance passenger transport is organised solely in the form of public tenders for exclusive contracts. External RUs currently have no access to the *Espressi Notturmi* (Intercity

overnight connections). In the (short) distance passenger sector, no tenders have been conducted to date. The national rail freight transport and long-distance rail passenger transport markets are open to national RUs.

Latvia

Latvia is complicated in comparison to other EU countries, as several regulatory bodies exist. The current Infrastructure Manager LDz is responsible for track access. An open access regime applies to national RUs for freight transport. No TERFN has been implemented to date in Latvia. Train path applications must be submitted at least 6 months prior to the new annual schedule. Periodic allocation of train paths is possible.

Lithuania

LG, the Lithuanian state railway, is run as a private-law enterprise and has its own accounting. Infrastructure and transport are integrated, but only accounting has been separated for these two sectors. Legislation on train path access and the train path pricing system is currently being reformed.

Luxembourg

CFL is responsible for the national transport and infrastructure services. These 2 sectors are sepa-

rated in terms of accounting. TERFN has been fully implemented. Domestic RUs (none at present) will also have open access to the network. The lead time for allocation of a regular train path is twelve months and there are also provisions for train path allocation in the course of a current year.

Netherlands

The railway undertakings in the Netherlands are formally independent from the state. The incumbent NS has complete institutional division including legal separation of proprietorship from the infrastructure provider ProRail. Both firms are publicly owned. The former national rail freight transport company is now part of the Stinnes/Railion group. Foreign freight RUs are granted access and transit rights for international freight services. In 2003, 18 railway undertakings, including the incumbent and its subsidiaries, held valid licences and were active on the network. The passenger market remains dominated by the incumbent NS which is currently negotiating a 10-year monopoly contract.

Norway (not a EU member)

Infrastructure in Norway is completely institutionally separate from the transport services. JBV is the Infrastructure Manager and simul-

taneously the Norwegian railway authority. NSB, the Norwegian state railway, has been separated into two companies: NSB BA: responsible for passenger transport, and CargoNet AS: responsible for freight transport. Both sectors are wholly owned by the state. International passenger operators have access to the network, as do international rail freight companies with a national licence. In the national rail passenger transport market there is access only to those train paths which are no longer used by NSB. At the moment, this does not apply to any route. Norwegian rail infrastructure legislation specifies that the King decides upon train path applications. The Norwegian Network Statement is the largest of all, running to over 800 pages. It contains such exotica as a map and statistics on 'Mouse Collisions'. We think they mean 'Moose Collisions' but even that is pretty exotic (although suffered by our proof reader while reading this issue!). BV is the only Infrastructure Manager in Europe which publishes its Working Timetable on the Web—in graphical form (p 20). There are two per year, published 6 months in advance.

Poland

Polish RUs are independent. The former Polish incumbent PKP, which has 10 subsidiaries is the main operator. Open access is granted for international groupings in freight and passenger transport. EU requirements for TERFN have not been implemented to date. There are 21 licensed national RUs in the freight transport market, they are mostly large industrial enterprises, which transport their bulk products or supplies.

Portugal

Portugal has separated infrastructure management from the provision of transport services. Horizontal separation has been effected only in terms of accounting. Infrastructure is managed by REFER, which is answerable to the Portuguese Secretary of State for Transport and obliged by law to grant foreign freight operating companies network access on certain corridors. Foreign passenger transport undertakings are granted network access only in the form of international groupings. The access regime for the national rail market in the freight transport sector is open access, in passenger transport. Train path allocation is transpar-

ent and there are uniform regulations for all market participants.

Slovakia

The infrastructure and transport sectors of the Slovakian state railway are separate in institutional terms- Railway of the Republic of Slovakia, SR as Infrastructure Manager and Eleztniná Spolonos as transport service provider. Both are owned by the state but SR has full autonomy. Freight and passenger transport are separate in terms of accounting. The Railway Act envisages the possibility of forming an RU both for passenger and for freight transport. There are uniform train path allocation procedures for all RUs.

Slovenia

The former Slovenian state SZ was transformed into a holding in 2003, with 3 subsidiaries, which handle the core business of freight, passenger and infrastructure management. These services are provided by enterprises which are legally, institutionally and organisationally independent.

Spain

The Spanish railway is currently in a state of upheaval. There is no legal or organisational separation of the infrastructure and transport divisions, as the Infrastructure Manager GIF is responsible only for new lines. The rest is managed by the state railway RENFE, which keeps separate accounts for infrastructure and transport. RENFE still has a monopoly and there is consequently no competition.

Sweden

In 1988, Sweden achieved full ver-

tical separation of the state railway SJ. In 2000, it was divided into 2 private-law enterprises, which remained in government ownership: Green Cargo is the freight operating company, SJ the train operating company. There is Open Access for foreign rail freight and passenger undertakings. Access to the passenger transport network is only possible in the form of transportation contracts, which grant exclusive rights. SJ has exclusive rights to those train paths which are operated without subsidies or at a profit. There is open access in the freight transport sector.

Switzerland (not a EU member)

Since 1999, SBB has been a Government-owned joint-stock company. The business units of infrastructure and transport are independent in terms of organisation, accounting and legal status, as is the second largest Infrastructure Manager and transport service provider BLS. Although BLS and SBB compete, they jointly handle train path management for most of the network. From the new timetable in December 2004, BLS withdrew from long-distance passenger transport, so that SBB and *Cisalpino* (a joint venture between SBB and *Trenitalia*) are the only providers in this market segment up to the year 2007. In the freight field, SBB Cargo and BLS Cargo, are independent joint-stock companies under the umbrella of their holdings. Foreign rail freight companies have access rights, but no agreement has been signed with any other country. Although open access also applies for passenger transport, regular commercial passenger trains require a concession.



Stuck at Grand Central after 1:30 a.m.

NEW YORK CITY -- Shortly before 1:30 a.m., the stragglers always break into a mad, sometimes wobbly dash. They must make it back to Scarsdale, or Greenwich, or Yonkers. The fleet and the lucky reach the gates just as the conductor shouts, "All aboard!" Sweaty and winded, they flop into their seats with self-satisfied laughter as the train pulls away.

But this is not their story, according to this report by Andrew Jacobs published by the New York Times.

This is the story of the people left behind on the platform when the last train late at night goes out of Grand Central Terminal. These tearful, angry and sometimes inebriated passengers blame that final mojito, a slow-moving high-heeled companion or a maitre d' who swore that rail service to the northern suburbs of New York City never stops.

But by then, the excuses do not matter. They are stranded, and before the self-pity can kick in, a no-nonsense amplified voice announces Grand Central's closing. "The station will reopen at 5:30 a.m.," it says. Within moments the police shoo everyone toward the exits and out onto 42nd Street.

New York may be the city that

never sleeps, but late each night an unhappy handful of commuters discover that such truisms do not apply at this vital transportation center. Trains to Long Island and many bus lines to New Jersey depart round the clock, but the three rail lines operated by Metro-North that leave Grand Central take a 4-hour-10-minute breather each night.

This leaves the dawdlers, the irresponsible and the uninformed to fend for themselves.

"I can't tell you how many times I've seen grown men in tears," said Stephen Nowicki, a Metropolitan Transportation Authority police officer who works the lobster shift. The night clerk at the nearby Hyatt hotel calls them "train wrecks." The cabdrivers refer to them as "Cinderella fares."

Out on 42nd Street, a mob of cabbies await the luckless souls. They shout "Connecticut, Westchester, upstate," and size up potential gold mines by their shoes and the weaves on their rumpled suit jackets. The fortunate driver can earn \$160 for a 90-minute trip to New Haven or \$70 for a 40-minute drive to White Plains. All fares must be paid in advance.

Last Friday night, Matt Mancini was a somewhat atypical pumpkin. A high school senior from the a

wealthy suburb, Bedford, N.Y., Matt had come to the city with 16 friends by limousine for a night of post-prom revelry. Perhaps it was the beer and vodka shared during the ride into the city, but Matt, who said he was 18, quickly lost his partying zeal and decided to head home early. The bathroom attendant at the club whose name he could not recall told him the last train left at 2 a.m. He came loping down the station's marble ramp just as the red lights of his train receded into the tunnel. Mr. Mancini had left his cell phone in the limo. His wallet held only a few dollars. "I guess I can wait it out," he said.

But after a few minutes pacing a sidewalk full of vaguely menacing-looking characters, Matt made a collect call to his father, an executive at Goldman Sachs who had been eagerly awaiting the return of his son. Within a half-hour, a black Lincoln Town Car arrived and Matt sheepishly crawled into the back seat. "I'll never do that again," he said. "Lousy prom."

The men and women who work the witching hour at Grand Central are not a heartless crew. Bob Angus, the stationmaster, stands at the end of the platform and signals the conductor to wait a moment if he spots a passenger galloping through the deserted waiting area. But by 1:33 or so, the game is over.

"Most of the guys who come late have had a few too many," he said. "Sometimes they miss the train because they're so drunk they go to the wrong track."

As if on cue, a woman in a black cocktail dress crouched down behind him and threw up into a shopping bag. Mr. Angus, a 29-year veteran of Grand Central, shook his head and helped the woman to her train.

In the 1940s, when Grand Central was a bustling transcontinental hub and the 20th Century Limited might pull in at dawn, an insurance salesman with a bad buzz might pass the night on one of the station's oak benches. Not anymore. Railroad officials describe the overnight closing as a way to give Grand Central an unimpeded scrubbing, but it also provides a way to foil late-night vandals and

OFF-PEAK											TO POUGHKEEPSIE		MILES
883	785	885	787	889	791	891	793	895	701	703	803		
PM 8:23	PM 8:28	PM 9:02	PM 9:20	PM 10:02	PM 10:20	PM 11:02	PM 11:20	PM 11:58	PM 12:20	PM 1:20		Grand Central Terminal	0
RR 24	8:28	8:12	9:30	RR 10:12	10:30	RR 11:12	11:30	RR 12:05	12:30	1:30		Harlem-125th Street J	4
	8:44	9:36		10:36		11:36		12:36	1:36			Morris Heights	8
	8:46	9:38		10:38		11:38		12:38	1:38			University Heights	9
	8:48	9:40		10:40		11:40		12:40	1:40			Marble Hill	10
	8:50	9:42		10:42		11:42		12:42	1:42			Spuyten Duyvil	11
	8:53	9:45		10:45		11:45		12:45	1:45			Riverdale	13
	8:56	9:48		10:48		11:48		12:48	1:48			Ludlow	14
8:48	8:59	9:27	9:51	10:27	10:51	11:27	11:51	12:23	12:51	1:51		Yonkers	15
	9:01	9:53		10:53		11:53		12:53	1:53			Glenwood	16
	9:04	9:56		10:56		11:56		12:56	1:56			Greystone	18
	9:07	9:59		10:59		11:59		12:59	1:59			Hastings-on-Hudson	20
	9:10	10:02		11:02		12:02		1:02	2:02			Dobbs Ferry	21
	9:12	10:04		11:04		12:04		1:04	2:04			Ardsley-on-Hudson	22
	9:14	10:06		11:06		12:06		1:06	2:06			Irvington	23
8:59	9:18	9:38	10:10	10:38	11:10	11:38	12:10	12:34	1:10	2:10		Tarrytown	25
	9:20	10:12		11:12		12:12		1:12	2:12			Philipse Manor	27
9:05	9:24	9:44	10:16	10:44	11:16	11:44	12:16	12:40	1:16	2:16		Scarborough	30
9:08	9:27	9:47	10:19	10:47	11:19	11:47	12:19	12:43	1:19	2:19		Ossining	31
	9:33	10:25		11:25		12:25		1:25	2:25			Croton-Harmon Av	33
	9:13	9:52	10:52		11:52		12:48		C 2:28			Croton-Harmon L.V.	33
9:20	9:59	10:59		11:59		12:55		1:06	C 2:36			Cortlandt	38
9:25	10:04	11:04		12:04		1:06		C 2:41				Peekskill	41
9:35	10:14	11:14		12:14		1:16		C 2:51				Garrison	50
9:40	10:19	11:19		12:19		1:15		C 2:55				Cold Spring	52
9:48	10:27	11:27		12:27		1:23		C 3:03				Beacon	59
9:55	10:34	11:34		12:34		1:30		C 3:10				New Hamburg	65
10:12	10:51	11:51		12:51		1:47		C 3:27				Poughkeepsie	74
PM	PM	PM	PM	PM	PM	AM	AM	AM	AM	AM			



vagrants.

Still, Dan Brucker, a spokesman for Metro-North, said that stranded passengers could spend the night in the stationmaster's office, although the uniformed officers responsible for clearing the station each night disagreed.

"Once 1:30 rolls around, everyone's out," Officer Nowicki said.

He and others said they sometimes sent passengers to a 24-hour diner or advised fearful suburbanites to while away the night near the subway entrance at 42nd Street and Park Avenue, where a police officer is stationed at all hours. For those with thicker wallets, the Hyatt offers rooms for \$270.

By 1 a.m., Grand Central's soaring rotunda begins to take on the aura of a fraternity party that ended too soon. A man in a tuxedo gives a woman in a crimson dress a piggyback ride to the platform, and boisterous adolescents whoop just to hear their voices echo off the vaulted ceiling, with its twinkling depiction of the constellations.

Gaits unsteady and faces flushed, the businessmen with ties askew

make their way to the information booth, where Heidi Tejada doles out track information and a sympathetic smile. "You can smell the booze through the window," she says.

A follower of the Landmark Forum, the personal transformation group once known as EST, Ms. Tejada is supposed to close shop at 1 o'clock but says she often feels compelled to stay at her post until 1:25. "I like to help people in need," she says. "And I hate having to tell people the next train is at 5:40."

On the street, the cabdrivers await the last train's departure much as a gambler might anticipate the slowing of a roulette wheel. They hew to the first-come-first-served doctrine, with some taxis getting in line as early as midnight.

These cabbies are a smooth-talking, philosophical bunch, well versed in the art of negotiation and feigned concern. Sometimes, when Milton sees a couple in the station vestibule engaged in a long goodbye kiss at 1:29, he will stop the would-be traveler to ask

a throwaway question in hopes of tripping him up. "He'll pay me \$100 for that kiss later on," he says with a smirk.

As the big clock on Grand Central's facade hits 2:15 and the stranded passengers thin out, Ian, a hefty man from Queens with a handlebar moustache, begins to grow restless. Warm weather always puts a dent in the bottom line, he complains.

"When there's a nice wind chill in their face, they're much more willing to negotiate," he says. But just as he is about the throw in the towel and return to cruising the streets, a young woman with a pierced nose shows up with that pained expression he has come to love.

The woman, who gives her name as Janet, needs to get to Ardsley, N.Y. "I've got to work tomorrow," she says, checking to make sure she has \$68 in her purse.

Asked how she came to miss the train, she shrugs. "I was having a good time," she says. "I was irresponsible. Never again."

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