

# Is Rail Making Progress?

A lot seems to be happening in the British railway industry at the moment. A range of projects have been completed, even though some of these have taken a long time to come to fruition: we carried out operational analysis on the Stirling – Alloa line in late 2002, whilst it was (as one of our ex-colleagues reminded us) last century (!) when we undertook an economic evaluation of Eastfields station, Mitcham, which opened in June.



*Looking South across the level crossing at Eastfields, towards an approaching FCC service*

Demand continues to rise on the rest of the network, as we have witnessed first-hand, with programmes of passenger monitoring on the St Albans Abbey and West London Lines. Indeed, some of the growth rates verge on the scary: how is any business supposed to manage growth of 1% per month?

And yet, there is so much uncertainty in the transport market in Britain, and the railways in particular, that one doesn't always get that 'happy' feeling.

The infrastructure maintenance and renewal demands for the industry are clearly huge, whether one believes Network Rail's or the ORR's estimates. These now include a range of minor upgrades and additional features, which is welcome news. But, without appearing to seem miserly, is this enough? Are we really making enough progress to go forwards, are we catching up under-investment in the past, and/or are we just running to stand still? The Government's plans for *major* increases in rail capacity seem unclear at present.

However, there have been recent changes in political views about the possible electrification of parts of the railway. This reflects recent increases in oil prices, which have to be good news for those businesses such as the railways which are energy-efficient. We have long had interests in energy minimisation (for instance, through our programme of attempting to achieve a zero carbon footprint by sequestering our CO2 emissions), but our expertise has recently been enhanced (see Company news below). Although the railway will benefit immediately from some new passengers, whether it has the capacity to deal with them in the medium- and longer-term looks less likely.

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As an industry, we are going to have to be much more responsive to changing situations. This may apply to us directly: works for the East London Line to Crystal Palace are due to start in the next few weeks, and may affect our office, but we will endeavour to make sure that we maintain contact by e-mail, even if the office needs to be closed temporarily on occasions. And when it's all finished, do come and see us.

*Nigel S Harris*

## KCRC Book

We are always interested in understanding and passing on best practice in railway operations and management, and some of that comes from Asian railways. We have supported editor Robin Hirsch in the recent production of "Managing Railway Operations and Maintenance", which features best practices from the Kowloon-Canton railway as it is subsumed into Hong Kong's other mass transit railway, the MRTC. Copies of the book are available at [www.anharris.co.uk](http://www.anharris.co.uk).

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## Company News

### New (and Old!) Faces

Two members of staff have joined the Company so far in 2008. Simon Field, undeterred from being lectured by Nigel on the MSc course at Newcastle University, strengthens the company's green credentials. As Secretary of the Car-Free UK group, and an expert on environmental issues, he has played a significant role in a major study we recently undertook for the Nova group of metro railways, in minimising energy requirements.



Also re-joining the Company is Matthew Smith, who has worked for us before (more than once!). He has recently completed a 2 ½-year spell as Southern's Accessibility Manager, and is continuing to work in this area for other clients. He is also providing much-needed assistance in the day-to-day management of the Company.

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### Irish Rail Business Model Specification

Railways in Ireland are currently enjoying a renaissance, with increased passenger traffic levels resulting from both continuing economic growth and a sustained programme of investment. This is bringing the replacement of older locomotive-hauled rolling stock by new multiple-unit trains, enhanced service frequencies, the laying of multiple tracks, network extensions, and

the modernization of signalling equipment. The overall pace of change is very great, providing management challenges on a day-to-day basis, and in planning for the future.

It was therefore decided that moves should be made towards the development of a business planning model, which would enable Iarnród Éireann to analyse its (*contd. right*)

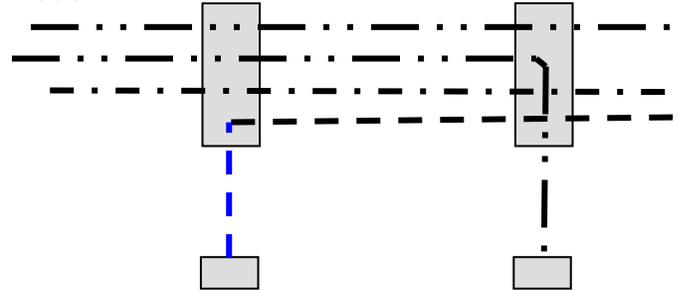
## Regular-Interval Timetabling in France and Saudi Arabia

This year, we have applied our expertise to a number of projects overseas. Two of these involved developing operational plans based on regular-interval timetabling, but in very different physical circumstances.

In France, more than 1800 kilometres of high speed line are already operated whilst a further 900 kilometres are planned to enter service in the next ten years. The Provence - Alpes - Côte d'Azur high speed line (LGV PACA) would extend the high speed network eastwards from the Marseille area. This would offer a travel time well under four hours from Paris to Nice and shorter travel times along the Mediterranean coast (Almost 10 million people live along the Barcelona - Perpignan - Marseille - Nice - Monaco - Genoa axis). Importantly, the new line could also free up capacity on the existing rail network allowing for local and regional train services to be improved.

However, there are a number of route options, which have been examined by the Swiss Consultancy SMA, using the Railway Consultancy as a subcontractor. The two main families of options bring different gains in travel times, and have different consequences on capacity and timetable planning. The Northern routes offer the best journey times between Paris and Nice. Alternatively, the Southern routes would free up more capacity along the existing line and at congested Marseille St Charles station, while offering the largest journey time savings for medium-sized cities such as Toulon. The choice of the best option is therefore likely to depend on the weighting of the criteria.

Rather further away, we have also undertaken some preliminary operational planning for new lines in Saudi Arabia.



The Kingdom of Saudi Arabia is currently investing heavily in the expansion of its rail network, which currently consists only of lines between Riyadh and Dammam, on the Gulf coast. Already planned is a new line for container and high speed passenger traffic between Riyadh and Jeddah, on the Red Sea coast, the so-called "Landbridge" route. Further extensions to this network are proposed and are at various stages in the planning process. As part of a feasibility study into two proposed new branch lines, RCL was engaged to devise a conceptual operating plan, including a draft timetable and analysis of motive power, rolling stock and crewing requirements. Because of the physical geography, one of the proposed lines is not a simple linear route, but itself has a number of branches to serve intermediate centres. Since both lines would be constructed as single-track routes, the optimal spacing of passing loops is a crucial factor. This is driven not only by the frequency of trains to be operated (a function of estimated demand), but also by their average speed, which is itself a function of the frequency of operation (since crossing of trains at loops imposes a time penalty).



*IE Mk 4 Train at Dublin Heuston*

*(contd. from left)*

business better and to undertake the testing of options for managing the railway. Following an international tender last year, the Railway Consultancy is delighted to have been chosen to develop the specification for this model. This will involve the identification of both the datasets (either already available or needing to be constructed) and the linking theoretical principles which underlie the commercial success of a railway. Our work will include developing and specifying relationships covering such areas as demand forecasting, operational costs, and asset management strategies and, importantly, the links between these. For example, higher train service frequencies may require a greater number of tracks but, if trains are formed of lighter vehicles, track renewal requirements may not rise in line with train mileages. The output from our work, due to be completed in early 2009, will be a formal specification for a business model which can then be programmed.

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## Station Wayfinding Signage

In the past few years there has been significant investment in providing step-free access to station platforms: a large number of small-scale projects are now being augmented with a centrally-funded programme of lift installations (the 'Access for All' fund). This investment is improving the accessibility of the network to many passengers, including people with luggage, parents with children, and disabled people. However, step-free routes are almost always different than the routes taken by the majority of passengers, and wayfinding signage has not kept pace with the infrastructural changes. All too often, there is either no signage, or a non-specific 'Lift' sign, which does not link this facility with the routes passengers require.

The Railway Consultancy was therefore commissioned by London Midland to ensure that as part of their comprehensive station re-signing programme all step-free routes are provided with wayfinding signage which provides the same level of information as signage for non-step-free routes. This work involved visiting each station and photographing all existing signage, identifying omissions, preparing revised wording where necessary, then compiling a signage schedule for use by the clients' signage contractor.

*Before*



*After*



## Ticket Dispute

One of the benefits of consultants is their independence, and this can be helpful when different parties in the rail industry disagree. We have been involved with a number of such disputes in recent years, the latest concerning the revenue apportionment for new ticket types introduced by FCC on the London – Brighton corridor, on which Southern is also a major operator.



*Passengers at Brighton have alternative train operators for services to London*

Although there are a number of journey planning rules assumed within the ORCATS revenue allocation system, these are not always appropriate for dividing up revenue. Our work on the London Bridge – Brighton corridor included a program of interviewing passengers found to have the relevant ticket types, supported by the analysis of at-station counts, on-train counts and ticket gate data, in order to establish the total usage of these tickets. It became clear that a high degree of statistical confidence was needed, given the sums of money involved, and this required multiple observations of a travel market which inevitably displays some day-to-day variation. Our report is providing the basis for FCC and Southern to come to an agreement.

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Have you visited our website  
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