

INFORMED SOURCES e-Preview July 2015

I'm afraid there are only two items in this month's column. This is largely because of the space needed for a comprehensive analysis of the bidding for paths in the 2018 East Coast Main Line timetable, where two would-be open access operators are challenging franchised train operator Virgin Trains East Coast (VTEC).

In the past I have tended to regard open access as peripheral to my reporting on the core railway. But the ECML applications are crucial both to franchising policy and the future of open access which, to my mind, is becoming a politically embarrassing legacy from a long-gone different age.

Open Access challengers for East Coast capacity

London North Western's 21st Century control centre

In the past competition 'on the rails' has been a side show. This time serious money is at risk. The Government, through its surrogate VTEC is taking on the might of Deutsche Bahn - ultimate owner of Alliance Rail - and FirstGroup.

Adding to the Alice in Wonderland nature of our industry is the fact that the winning VTEC bid was awarded on the assumption that the franchise will have acquired the necessary Long Distance High Speed (LDHS) paths by the time the Intercity Express Programme (IEP) fleet enters squadron service.

Having described the duties and procedures of the Office of Road & Rail (ORR) in assessing open access applications - particularly the working of the 'Not Primarily Abstractive' test, the column runs through the rival offers. All three firms have given me detailed briefings and I hope I have justified the time they have invested.

VTEC aspiration

VTEC has come up with an integrated timetable based on six hourly services plus an alternate-hour path. Leeds has two trains/h timed at 2h. For the Edinburgh service VTEC has one fast train an hour calling at Newcastle, plus York in alternate hours. The single stop gives the 4h headline journey time.

A semi-fast will leave half an hour later calling at intermediate stations. With the stops it takes 4h 25min so that it arrives just ahead of the following fast service.

A further hourly semi-fast service leaves 6 min after the Edinburgh fast and runs to Newcastle. This will be extended to Sunderland in the peaks showing that competition works both ways.

A sixth hourly service calls at Stevenage, Grantham and Newark before running to Lincoln or Harrogate in alternate hours.

Finally, to give York two fast trains an hour, while allowing the alternate 4h London-Edinburgh timings, there is an alternate hours fast service to Middlesbrough, calling at Peterborough, York and Northallerton.

VTEC reckon that the acceleration of the IEP should allow the semi-fasts to make their stops without the fast services catching up. The IEP Train Technical Specification specified 229 minutes (3h 49min) for a London-Edinburgh run with five stops. However, this schedule assumed zero minutes station dwell time, no allowance for performance pathing or engineering times, current line speed profiles and no infrastructure enhancements. Yes, really!

Adjusting for all the omissions, ECML timetabling guru Jonathan Tyler reckons that this equates to a real world timing of 4h 16min. Add in three more stops, say 7 minutes and you get 4hr 23min, which sounds about right.

But then note a DfT Press release of 18 July 2013 which claimed that IEP would cut journey times 'between London, Leeds, Newcastle and Edinburgh by up to 18 minutes'. That has confused a lot of people who assumed it referred to headline time.

In fact, on a one-stop blast from London to Edinburgh a nine car Class 800 is only 6 seconds faster than one of the seven car IC225 pocket rockets VTEC is planning to use. And a full length IC225 is only 2-3 min slower.

Anyway, VTEC emphasise that their timetable is a finely tuned integrated package and that the connectivity would collapse if you start trying to move paths around the clock face, fit in more station stops or have trains overtaking, let alone lose the fast path to open access. GNER lives!

Alliance Rail, is applying for paths as Great North Eastern Railway (GNER). It is proposing a 3h 43min service provided by a fleet of 12 nine-car Pendolinos.

And, yes, Alstom is willing to build the trains and, subject to the work-load at its Savigliano factory in Italy, could deliver the first train in 24 months and then a train per month after that.

In the column I have several tables, one going back to 1986, modelling the effect of tilt on ECML journey times.

Alliance is proposing an hourly London-Edinburgh service with one stop at Newcastle plus pick up or set down at Stevenage in the morning and evening peaks. A Stevenage stop would add 5min. The service would start with the December 2018 timetable.

Clearly tilt will need a number of infrastructure upgrades. Alliance says that infrastructure expenditure, which it will fund, will be 'well into the tens of millions'.

As with First, modal shift from air will be the main revenue driver. But it is hard to see how a faster service could not take traffic from VTEC.

FirstGroup

FirstGroup's application is based on winning traffic from the low-cost airlines by filling a 'gap in the market'. The new service will offer five

trains a day each way, also from the December 2018 timetable, using a fleet of five five-car Hitachi AT300 electric IEP derivatives.

Journey time would be 'around 4h flat' with stops at Morpeth, Newcastle and Stevenage. However, in contrast to Alliance, FirstGroup told me that 'value rather than speed is the proposition we're aiming for to try and capture passengers from low-fare airlines'.

To compete with the airlines for business travel FirstGroup is adopting a low-fares, single-class policy. Its analysis shows that the average London-Edinburgh single rail fare is £60. The open access model is based on average fares below £25.

#### Paths

The column also covers the practicalities and implications of this open access battle. At issue is the feasibility of the 'eighth high speed path' which among other things would require 18 trains/h over Welwyn Viaduct. It would also knock an estimated 1.8-2.0 percentage points off the ECML PPM.

Finally, even readers with a heart of stone may crack a smile at this. Responding to the Alliance application, DfT argued that open access services would 'severely weaken' the value for money of the Intercity Express Programme.

DfT's technical consultants calculate that a rival open access Edinburgh service would add £2,030m to the Net Present Cost of IEP. According to DfT, IEP delivers 'very high' value for money which is 'largely due to revenue that it is forecast to generate'. Really? Any modern 125 mile/h electric train would generate the same revenue and cost a darn site less.

#### London North Western's 21st Century control centre

After all this heavy theoretical stuff, it was a pleasure to write up my visit to the recently upgraded Integrated Electronic Control Centre (IECC) at Marylebone. Back in 1991, Marylebone was my first IECC and my recent visit was the chance to see the result of a quarter of a century of progress.

Marylebone IECC is the first live application of DeltaRail's Scalable IECC. It includes 'reconfigurable' workstation technology which allows any workstation to control any selected section of route.

For example, during commissioning the reconfigurable function allowed the whole route to be controlled from a single work station. In daily operation Marylebone IECC controls the route through two workstations, North and South, the southern 'desk' covers Marylebone to just south of Princes Risborough while the Northern continues to Aynho Junction fringing with the Banbury South manual box.

When I suggested that to accommodate Chiltern's new Oxford service it would simply be a case of adding another screen, I was shown a section of the track diagram on the synoptic panel framed in yellow. There was the new railway: the IECC already incorporates all the data needed to control the new line to Oxford Parkway.

What IECC Scalable has to offer was demonstrated on the simulator, an exact replica of the control room on the floor below. The full suite of facilities which DeltaRail can provide with Scalable are still being explored, but the first enhancement is likely to be the platform docking tool. This allows the signaller at the workstation to call up any train's head-code and make platform changes instantly without going into the Train Timetable Processor.

What impressed me most during the demonstration was the power of the 'right click' on the mouse and the use of drag and drop. Back in 1991 the original IECC used tracker balls to move the cursor on the screen. With a bog-standard mouse Scalable gives the 21st Century signaller Windows-type functionality - such as drop down menus.

You can also store 'engineers overlays' which represent the standard areas used for engineering possessions. With IECC Classic, taking a possession involved setting all the signals in the possession to danger and locking points individually. With Scalable, the stored overlays and can be implemented at the click of a mouse which sets all the signals and applies reminders.

You'll find lots more detail in the article , but a feature which I found fascinating, and brain stretching, is DeltaRail's latest enhancement to WACI, the system which allocates the outgoing head-code when a train arrives at a terminal station, saving a lot of work. As I describe in the column, the enhanced version is even cleverer.

A brief visit to the operating floor gave me a chance to see IECC Scalable in action. What struck me was the signallers' workload even with ARS running.

Calls during my brief stay included a technician seeking approval for a Facing Point Lock check, managing a bridge strike and a virtual electronic token exchange with Claydon box. This constant telephone traffic was a reminder of the value of the latest technology in reducing the signallers' routine workload.

While not wanting to entangle my hosts with this column's views on signalling politics, with Traffic Management (TM) sliding back into the next Control Period, Marylebone IECC looks like the future to me.

It had been argued that investment in Scalable and Enhanced ARS at more IECCs would be overtaken by TM, but TM itself has been overtaken by events. It seems to me that Network Rail should follow the lead of another organisation challenged by budget constraints and technology, the United States Air Force.

Procurement policy is now based on the 'art of the available', rather than the 'art of the possible'. From IC125 to TPWS that philosophy has served the railway well.

#### Roger's Blog

Last month's blog left me looking forward to a couple of days away from the desk. The Marylebone IECC visit you have already read about, but the trip to SWT's Wimbledon Depot has had to be held over to next month.

While the purpose of the visit was to see progress with the Class 455 re-tractioning, there were still some English Electric EE507 traction motors to be seen alongside the new kit. I was offered one as a souvenir, but couldn't see it as a garden ornament.

As an aside, the Wimbledon Class 455 fleet, electro mechanical camshafts, DC motors and all, is now up to seventh in the UK EMU Top Ten reliability chart.

This coming week, on Wednesday, Midsummer Day, it is the Stagecoach summer reception. This is always an enjoyable, and productive networking event, although this year it will be overshadowed by the collapse of the SWT/Network Rail Deep Alliance. Did I say 'collapse'? Sorry, the official Network Rail description is 'reshaping', as in 'Richard Burton and Liz Taylor reshaped their marriage twice'.

Then it's the Modern Railways Innovation Awards, held as part of the Fourth Friday Club meeting. Our guest speaker is Clare Moriarty, Director General, Rail Executive, DfT.

Next Monday I'm attending the Railway Industry Association's 15th Unlocking Innovation Workshop. Then July is fairly quiet at the moment, except for an evening talk I am giving on July 15 to a local museum supporters' group on the theme 'Coming to a railway near you' which is essentially about what Thameslink and Crossrail will offer.

At present I'm working up another of my 'Year Zero corrective' articles which put today's policies into historical context. This time it's built round the missing column in a table in the Rail Supply Group's launch brochure.

Column 1 lists where the UK is world class today. Column 2 adds where there is potential for the UK rail sector to be world class in future. You can no doubt guess the heading of the new column.

Meanwhile, I'll do my very best to get some traction and rolling stock in next month's column.

Roger