

INFORMED SOURCES e-Preview August 2018

After last month's block-buster analysis of InterCity East Coast franchises, it is back to the usual format for the August column. First up I return to the question of what the new rolling stock assembly plants going to produce after their current orders finish.

Also in the August magazine I have a feature article describing Network Rail's first live operational Traffic Management (TM) system. In 12 months, Resonate at Derby, working with Digital Railway, has delivered Integrated TM for the Great Western Main Line. With the aid of screen shots I take you through its use.

Siemens makes it five UK rolling stock plants

Time to reboot Intercity East Coast?

New train TIN-watch

Too darned hot

Back in the December 2017 column, I compared the growing number of rolling stock manufacturers setting up UK production facilities with an analysis likely future demand. Since then, key orders have been awarded, clarifying the longer-term prospects for the various suppliers.

For the last 15 years Siemens has rejected the idea of a UK assembly plant. That reluctance now vanished following the award of the contract for the Piccadilly Line replacement stock under Transport for London's Deep Tube Upgrade Programme (DTUP), with a new train assembly facility at Goole in Yorkshire is now a firm commitment. With potential follow-on orders running into the 2030s Goole is sitting pretty.

CAF's existing commitment to build a new facility at Newport. Has been justified by the recent award of the Wales & Borders franchise. Around 200 people will be employed when the plant opens later this year.

Nor should we forget Alstom's new site at Widnes, currently painting Pendolinos. Add in Bombardier at Derby and Hitachi at Newton Aycliffe and we have five UK rolling stock plants. Potentially, it could be six, with Talgo also looking at potential sites for a facility to assemble trains for the UK market.

For long term survival each plant will need to be fed with a steady supply of new contracts. As we have seen in recent years, when just Bombardier and Hitachi formed the domestic industry, the threat of factory closure has become a marketing tool when faced with outside competition.

So we can expect more pleas of 'Give us an order or the kitten gets it' during the bidding rounds for the South Eastern, East Midlands and Cross Country franchises. These three franchises, together with the West Coast Partnership, are all due to be let by December 2019.

Potential orders

Detailed tables appeared in the December 2017 column, but briefly, the most immediately opportunity is replacement of the South Eastern Networkers. There had been talk of replacing the Electrostar fleets too. However that may be a total extinction too far.

With franchise award due in August we shall soon know which plant has earned a longer lease of life. If Stagecoach wins South Eastern, then Widnes will have lift-off because Alstom has been working exclusively with Stagecoach and will take a 20% stake in the franchise operator.

East Midlands does look like another mass extinction, with the IC125s to go plus the Class 222 Meridians. According to Informed Sources, DfT has banned a revival of Project Thor. This was the addition of a pantograph/transformer vehicle to the Meridian DEMUs to create a bi-mode.

Transport Secretary Chris Grayling, has specified bi-modes on the East Midlands Intercity service by/from 2022. With around 250 vehicles to be replaced this might have seemed like a gimme for Hitachi.

However, as reported in the last issue, Bombardier will be offering what it claims will be a full-on 125 mile/h Aventura bi-mode. Also to be let in 2019 is Cross Country. Here too Voyagers are to be replaced, presumably with bi-mode units.

HS2 will be procuring the new fleet of Classic Compatible Very High Speed Trains. With Siemens and Alstom in the process of merging and Bombardier and Hitachi forming another joint venture, the field had shrunk. Fortunately for HS2, CAF was so vexed by its failure to make the shortlist, that it took HS2 to judicial review and has been 'welcomed' back into the game.

With the new Very High speed Trains, being procured by HS2, and due to be ordered in December next year, that is not going to put significant work into factories this side of 2022 at the earliest. And we have already had the first 'kitten threat' with a local official saying the contract should go to Newton Aycliffe.

Bidders for the West Coast Partnership, will also have to decide what to do about Pendolino and the West Coast Voyagers for the long terms. 2022 seems to be a popular year as the Pendolino fleet is protected by a Section 54 agreement until March 2022. However, the Section 54 for the 100 Class 221 vehicles runs out in March next year.

Prospects

CAF has work on Wales & Borders until 2022 – that year again - and may assembly later deliveries of some of its other UK contracts at

the new facility. But if the plant is to survive it will need more work and the only EMU show in town is South Eastern.

Bombardier has dominated recent EMU contracts with the Aventura. Derby now has firm orders for more trains than the three other builders with UK plants put together.

However, the order book is matched by a high production rate which means that more work will be needed from 2021. Either South Eastern or a launch order for the Aventura bi-mode is needed.

Finally we have Hitachi, where Newton Aycliffe is the plant most at risk. Apart from the remainder of the ScotRail Class 385 fleet, the plant is wholly dependent on the Intercity Express Programme (IEP) contracts.

LNER IEP deliveries start with the 13 nine car bi-modes which will replace IC125. The first is now scheduled for acceptance on 19 November.

However, it appears to have taken longer than expected to build up weekly output at Newton Aycliffe. As a result Hitachi's home plant at Kasado in Japan is manufacturing 20 IEP sets for LNER. This will maintaining deliveries at the contractual one train a week and should see the last IEP will leave Newton Aycliffe at end of March 2020.

So for Hitachi, too, Networker replacement or the EMT bi-modes is a must win. Could be interesting should Stagecoach win the South Eastern franchise.

Intercity East Coast – no quick fix?

As DfT's Operator of Last Resort, London North Eastern Railway (LNER) has the dual role of managing the Intercity East Coast (ICEC) franchise through the demanding times ahead, while starting the task of working with Network Rail to bring together the teams operating the track and trains on what Transport Secretary Chris Grayling calls the 'LNER Network'.

Once the teams have been 'brought together', LNER will be let as the private sector component of a 'genuine' public private partnership, sometime in 2020.

Yes, of course I know that even if Chris Grayling knew what he had in mind, the timescale is completely bonkers. And that is even before you get around to asking just what sort of pig would be in the poke being offered to the, assumed, gullible private bidders.

When it comes to pigs and pokes there is a strong similarity between the East Coast Main Line (ECML) today and the West Coast Route Modernisation (WCRM) two decades ago. On the West Coast Virgin at least had a contract and was able to demand a schedule of works once it saw that WCRM had been going nowhere.

But as the correspondence between David Horne of Virgin Trains East Coast and Rob Macintosh of Network Rail London North Eastern & East Midlands Route (Informed Sources March 2018) highlighted, there was no correlation between the enhancements Stagecoach/Virgin assumed they were going to get and what Network Rail thought it was committed to provide to enable new Intercity timetables planned for 2019 and 2020.

One thing I got wrong was to argue in favour of Stagecoach continuing to run the ICEC franchise under a management contract, purely on the practical consideration of continuity of management at a difficult time. What I did not allow for was that VTEC Managing Director David Horne and his management team would TUPE across to the OLR.

This means that while the existing management can continue running the daily railway in parallel with handling the transition from IC125/225 to IEP and bringing in the May 2019 timetable enhancements, LNER Chairman Robin Gisby, supported as necessary by the members drawn from the OLR consortium, can focus on the big issues, starting with nailing down the infrastructure enhancements. Even introducing new trains is rarely straightforward. LNER will now receive the first of its 13 nine-car Class 800 bi-mode on 19 November, with deliveries then running at one set per week. There should be sufficient units are available for the start of the proposed Bradford, Harrogate and Lincoln services in May 2019.

This schedule had been threatened by signalling interference issues found during IEP test running under electric traction between Northallerton and Berwick. These emerged at the beginning of June and resulted in a ban on IEP running in electric mode over the affected section.

However, Just after Modern Railways went to press, Informed Sources reported that a solution appeared to have been found. Testing with a single train was successful, the next stage will involve passing trains.

But essential to anyone thinking of buying into the proposed Partnership will be confidence that the infrastructure enhancements to support ICEC's sixth Long Distance High Speed (LDHS) path on the ECML, will actually materialise. VTEC had sought rights from May 2019, but ORR, wisely, put this back to May 2021.

Combine these factors and any return of LNER to the private sector, which would depend on being able to offer a stable ICEC business, could easily be five years way. I can't see any private concern willing to ride into the East Coast Valley of Death for a fourth time until a proper East Coast Route Modernisation, with a firm specification, delivery schedule and committed funding for any enhancements is underway.

New train TIN-watch

This feature has been running for seven months now and I am still waiting for the moment when one of the new fleets takes off and starts recording the reliability levels demonstrated by even average fleets in its category. Here we have three EMUs and a bi-mode from established manufacturers and the latest percentage improvements in Miles per Technical Incident Moving Annual Average (MTIN MAA) on the previous month's figures are pretty marginal. I don't think it is unfair to point out that none of the new fleets can yet match the 8933 MTIN MAA of Northern's Class 142 Pacer fleet.

Summer of '83 revisited

Following on from TIN-watch, when the Period 4 results come out it will be interesting to see if the overheating crisis which hit the GWR Class 800 bi-modes in the recent heat-wave registers. At the end of one day, half the diagrammed units were out of action as engines shut down through overheating.

With the new generation of 125 mile/h Diesel Multiple Units such as the Class 180 and the Class 22X variants, designers were faced with the challenge of fitting a 750hp diesel engine into an under floor raft which had to include the ancillaries such as the cooling system. Everything is a tight fit and getting the air to flow into and through the radiators is much more difficult compared with a power car with a socking great grill on the body side and a fan to match inside.

With space at a premium, the margin for fouling of the radiator is not going to be generous and access to the radiators for cleaning is unlikely to be easy. With a potential 1000hp at full rating, the bi-mode's MTU diesel engine is going to be rejecting even more heat than the Cummins in the existing 125 mile/h DMUs. These high-power under-floor traction packages are masterpieces of engineering design, but compared with a power car it is making a rod for the maintenance engineer's back.

Now the Government sees bi-modes as a cheap and cheerful way of getting round 'unaffordable' electrification and Bombardier has joined the party with its Aventra bi-mode. Still, according to transport ministers the diesels will be replaced by batteries or fuel cells before too long.

Roger's Blog

Well, the Modern Railways Innovation Awards were as well supported as ever with a fascinating range of shortlisted entries in the various categories. Did we really have the first ceremony back in 1998?

This year my job as Master of Ceremonies was slightly more demanding, since the Thameslink timetable was in full melt-down mode and the Thameslink Project had won two awards. The world's first application of Level 2 ETCS with ATO overlay was a stand-out winner when it comes to technical innovation.

My challenge was decoupling the infrastructure from its operational use, and after much barracking when the 'T' word was first mentioned, I think I managed to get the distinction across and the awards were well received – well no-one booed.

The following week there were some thought provoking papers at the IMechE conference on Traffic Management. I was particularly taken with the paper from London Underground. Having first thought that there is not much crossover from an A to B metro to the complex surface network, the paper provided some valuable insights on the philosophy of regulation and supervision which I had been mulling since I saw Resonate's new Luminare TM in action. Of course these conferences are also about networking and I was able to discuss with a Siemens chum their approach at Three Bridges during a break.

After that it was the Stagecoach Summer Reception, slightly muted this year following the announcement of the final cost of the financial collapse of Virgin Trains East Coast. Once again, lots of Informed Sources present.

I left earlier than usual because of the Thameslink problems and went to Finsbury Park rather than Kings Cross. Don't want to bore you with my 'timetable chaos' war stories, but for 20 minutes, as the PIS showed conflicting messages, the platform staff has to tell the growing crowd of frustrated passengers that they had no train running information to pass on.

Eventually a Class 313 rolled in. The platform displays said 'stand back', but it stopped on a green signal and, after consultation between platform staff and the driver, it was decided it would be all stations to WGC, excluding Brookmans Park and Welham Green. The way management left front-line staff unsupported during the crisis was not my idea of how to run a railway.

But now it's the school holidays which, among other things, makes it easier to fit in visits. I've got to set a date for a meeting with a long standing chum who is advising government on a subject close to my heart. I'm also looking forward to visiting Swindon to see how Great Western Main Line Control is using its new Integrated TM. And I must do something about a holiday.

Meanwhile next month I'm going to risk entering a specialist railway jungle where the column has not gone before and established experts await the tyro. So as soon as this blog is finished, it will be time for more research.

Roger