

For this month's column I thought it might be of interest to readers to provide a comprehensive update on the status of the new trains due to be delivered this year. What with background and analysis it expanded until it almost filled the entire column, including a dozen or so tables.

I hope you will think it worth the effort. And I wouldn't be surprised if some dates had already slipped back between writing and publication.

Train makers face 'year of truth'
Romford ROC cancelled

Engineers commissioning the new generation of software-enabled trains are facing the problem that pretty well every system, and even sub-system, on their train is computer controlled with its own software. This also has to interface with the train's third party software based systems.

For example, during a recent run in a Great Western Railway Class 800 the Universal Access Toilet was all lit up, but the door had lost power and wouldn't lock. When I reported this failure to a member of the on-board staff, she replied that it was a common issue and the toilet needed re-booting.

Lest you think that this is just a case of hide-bound traction and rolling stock engineers unable to cope with new fangled technology, in the column I quote the Lockheed Martin F-35 fighter comparison.

Its software has been released in 'blocks'. The latest block, which will meet the full military specification, took over 30 iterations of the software to implement. According to Arriva Rail London, the software for the Bombardier Class 710 Aventura, which has yet to enter service, has reached Version 27.

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Delivery schedule pressure-point check list
*Non-PRM TSI compliant stock replacement
*Basis of new timetable
*Initiates cascade
*Termination conditions in franchise agreements
*Fulfils political aspirations
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Sorting out what used to be called 'teething problems' takes time and time is something we haven't got As the Rail Delivery Group reminds us, 'hundreds of new and refurbished-as-new carriages are to be rolled out in 2019'. Unfortunately some of them should have started rolling out in 2018.

Once, a delay would have been merely embarrassing for train operators and manufacturers and annoying for passengers and politicians seeking credit for the influx of new trains entering service.

But when Modern Railways is published it will be 341 days to 31 December. And when Big Ben strikes 12 and the fireworks start, it will be illegal to run rail passenger vehicles in public service that are not compliant with either the Rail Vehicle Accessibility Regulations or the Passengers with Reduced Mobility Technical Specification for Interoperability (PRM -TSI).

While around 3,500 ex-British Rail passenger vehicles are compliant, there are still sizeable fleets, which will not be compliant and, theoretically, will turn back into pumpkins, or at least scrap, when midnight strikes on 31 December 2019.

There is provision for derogations or, more probably, short term dispensations, for then to remain in service. However the political and reputational damage of old trains running on could be considerable.

But what can't be fudged is the link between new train deliveries and the introduction of new timetables based on their improved performance. Some red faces have already been saved by Network Rail deferring major timetable changes from this May to December 2019.

Review

In the column, every new fleet has a table listing the date the order was placed, the original service entry and contract completion dates and the current forecast for when all the fleet will be in service. Having asked all the manufacturers for their latest delivery forecasts, I found a surprising lack of precision across the industry, with regular contravention of Informed Sources 3rd Law.

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Informed Sources 3rd Law: Mistrust all forecasts based on the seasons.
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Currently the highest profile victim of late delivery is the Gospel Oak-Barking line. Following electrification rolling stock for the route was to be provided by eight units from within the Bombardier Class 710 Aventura EMUs ordered by Transport for London in June 2015.

Pending completion of electrification, this service had been operated by eight Class 172 DMUs sub-leased from West Midlands Trains. Termination of this sub-lease had been due at the end of 2018 but is now being phased to the end of March.

If the Class 710 software issues can't be resolved promptly, GOBLIN could be without trains. This highlights the impact of outward cascades and the need for the operator to act fast when a contract starts running late, rather than hope that deliveries will catch up.

When the Hitachi Class 385 EMU fleet was delayed by windscreen problems, Transport Scotland rapidly devised and implemented Plan B, bringing redundant Class 365 units north to replace DMUs on its extended electrified lines.

Greater Anglia is Exhibit A for PRM-TSI compliance. Supplementary Tables in the column list the existing fleets being replaced by each new fleet, with non-compliant stock colour coded red. It's a colourful column in some places.

In the case of Greater Anglia I make it 137 non-compliant EMUs which will have to be replaced by the end of the year. In addition the non-Renatus Class 321 units come off lease on 31 October, placing more pressure on Aventura deliveries.

Bombardier is increasing the number of Aventura production lines at its Derby works to six. It's going to an interesting race between production capacity and time.

When it comes to timetables it is an ill wind etc. In the case of CAF's Northern contracts, the delivery of the Class 195 DMUs has slipped back to Spring 2019. The intention had been to have three in service before the end of 2018 with the full fleet available for the Northern Connect timetable change in May 2019. Fortunately the pressure on delivery has been eased by Network Rail's decision to defer the major timetable upgrade to December 2019.

Northern is the prime example of political aspiration risk. Elimination of the Class 142 and 144 Pacer fleets became a manifesto commitment in the last General election. Withdrawal is already running late. Having to obtain a derogation to run into 2020 would be a major political embarrassment.

Delivered

Along with Siemens, Hitachi shares the rare distinction of having completed delivery of a new-generation fleet. All 57 Class 800 five and nine car bi-modes for GWR, have been accepted.

Under the terms of the contract, Train 57, which at the time was expected to be a Class 801 electric multiple unit, was scheduled to be accepted on 6 July 2018. As we know, with the Great Western Electrification Programme (GWEP) running late, the Department for Transport decided that the entire GWR fleet would have to be bi-modes, requiring a contract variation.

Then, because the delay to GWEP meant that the electrified section of the GWML for test running would not be available on time, a 90 day (12 week) extension was granted. This took deliveries up to the end of September 2018. So three years after the contract was signed, with sundry changes in between, Hitachi was only three months late in delivering the final train.

Interestingly Siemens' completion of the Class 700 Thameslink fleet was late by a similar amount. Although, of course, all the new fleets are struggling with reliability.

As I worked through the new fleets on order I realised that with the creation of the Class 319 'Flex' bi-mode conversion, re-designated Class 769, Porterbrook has added train re-purposing to its core leasing business and would need to be included in the review.

Development of the Class 379 has been protracted to put it mildly. However deliveries to Northern, Transport for Wales and GWR should now accelerate. Porterbrook was noteworthy for not contravening the 3rd Law in its response to my query for delivery dates.

Stadler

British railway managers and engineers have always sought solace in the comforting belief that trains from a new supplier – preferable foreign – will automatically be better than the rolling stock they have in service. Thus in BR days, Metro-Cammell (later absorbed by GEC-Alsthom) was the new BREL. Contrarily, in the case of London Underground, BREL became the new Metro-Cammell.

Then Siemens, with Heathrow Express, became the new Alstom, before Hitachi, with the Class 395s for HS1 domestic services, became the new Siemens. And now, Stadler is the new Hitachi, with high expectations for an immaculate entry into service with Greater Anglia.

But even Swiss precision cannot avoid delivery slippage with a new design. Originally due for completion by December 2019, the latest forecast is 'by the end of Quarter 1 2020'.

Entry into service dates have still to be determined, other than 'the middle of this year'. Abellio wants to maintain some flexibility to maximise the impact of the launch and ensure it goes smoothly. Delivery of the Intercity replacement EMUs are time critical as the current Mk3 loco hauled coaches are not PRM-TSI compliant.

I nearly overlooked the smallest supplier in compiling this review. Like its contemporaries, Vivarail's initial order, for the Bletchley-Bedford Marston Vale line is already late. The delay, announced in October, was attributed to technical issues with the first diesel-electric unit. A 'soft introduction' is now planned to start 'before Easter' (21 April). This delay has not affected delivery of the diesel-battery-electric hybrid units being supplied to Transport for Wales for the Conwy Valley line.

Upminster IECC re-booted

One thing I try not to do is boast 'I told you so'. True, there are times when I am looking up a reference in past columns when I feel a glow of pride about an accurate forecast. But experience shows that if I flick on through the pages to see what else I got right, I may well find something I got embarrassingly wrong. And the last thing I want to do is encourage readers to compile a list of my greatest misses.

However, in the December 2018 e-Preview I wrote 'it seems likely that consolidation of signalling for the Anglia Route at the Romford ROC has been deferred. If signalling of c2c is to remain at Upminster IECC it seems illogical to put in Isolated screens when you could upgrade to IECC Scalable and put in Resonate's Luminare full house Integrated Traffic Management.

And Network Rail has just confirmed to me that Romford ROC is no longer going to take over the signalling and control for the Essex Thameside route. Staff will remain at Upminster where the workstations will be upgraded to IECC Scalable. Migration of Liverpool Street IECC to Romford ROC remains the long term strategy 'but not in the timescales originally envisaged'.

New Train TIN-Watch

While reliability is improving slowly, in this month's column I take a look at the work the new fleets are delivering, using the simple metric miles run per period by a unit. Obviously intercity diagrams offer scope for higher mileage than commuter duties, but GWR are clearly working the Class 800s hard.

Roger's Blog

Last month's blog ended with me wondering whether we would have an IC125 or a Class 800 for the Modern Railways staff Christmas Lunch. And, when I rolled up at Paddington there was an IC125 waiting for the Modern Railways team on platform 1.

As ever it was a great day out, with more of us present than in the last couple of years. With convivial company, excellent food and wine and professional Pullman service from the GWR catering team, we celebrated another year in style.

Of course we didn't forget the working railway outside the window and when the rate of progress slowed, Real Time Trains was called up on various portable devices. It appeared that we had another IC125 on one power car ahead and those of us planning on a connection at Exeter for the return to London started doing mental Traffic Management sums as the crawl continued.

Coffee and mince pies having been served, a couple of us jumped out at Taunton and caught a Class 802 back to London. It was a wise choice as the connection at Exeter was under a minute, requiring a sprint over the bridge that would have challenged even Usain Bolt.

This week it's the Modern Railways Fourth Friday Club at which the Golden Whistles are handed out. This is the awards ceremony where I get the chance to sit back and enjoy the event and socialise, note book at the ready of course.

Run jointly with the Institution of Railway Operators and organised by my colleague Tony Miles, the 'whistles' celebrates railway operation excellence. Just as the depot engineers get spanners, operators get Acme Thunderer whistles.

As with the Golden Spanners, there is a morning conference which will focus on lessons learned from the May 2018 timetable. Network Rail chief Executive Andrew Haines will give the keynote address. Guest speaker at the lunch will be Dyan Crowther, Chief Executive of HS1.

At this time of year, the new diary takes time to fill up. However, February sees the Guardian's George Bradshaw Address. This year the speaker is Keith Williams who is leading the Government's Rail Review. Which reminds me that I must get my submission in smart-ish.

Roger