

INFORMED SOURCES e-Preview January 2017

A varied range of topics in this month's column, which I hope will provide interesting reading over the Christmas break. There's also the annual rolling stock reliability review with the results of the Golden Spanners and data for every fleet. And if that is not enough I've even been allowed to write the Welcome page, including some classic East Coast driving that got me home on time.

Grayling's Statement – much ado about not much.
DfT in charge of £450 million for Digital Railway V2.0
New trains threaten performance
Bi-mode ate my electrification

Readers may have been surprised by the Daily Telegraph's preview of a speech to be given to a Conservative think tank by Transport secretary Chris Grayling. In fact what emerged when the paper was published was far less radical than even Modern Railways' thoughts on vertically integrating franchises in a recent editorial. The one exception was the proposed approach to the restoration of the Cambridge-Oxford East West Rail line

Construction will be the responsibility of a new organisation separate from Network Rail called East-West Rail. Its main task will be to secure private sector involvement to design, build and operate the restored line. This sounds something similar to the Design Build Operate and Maintain (DBOM) schemes of the 1980s.

During a brief chat the day before the speech, Chris explained that the construction of EWR will also introduces 'contestability' to the rail infrastructure market. Currently DfT doesn't know what new infrastructure ought to cost – only what Network Rail claims it costs.

Otherwise the speech was unexceptionable. Mr Grayling wants the railway run 'by one joined up team of people'. While they won't have to work for the same company they will have to work 'in the same team'.

But while there is much well-meaning talk of 'alliances', they really do need to be formal arrangements with commitments backed by contracts. To ensure this, the replacement South Eastern and East Midlands Franchises will be let as 'an integrated operating team between train services and infrastructure'.

I suspect that may be easier said than done because of the asymmetry of the ability to bear risk between the state (infrastructure) and the private sector (operator). Because of this the new alliance-based franchises may be more attractive to the state railway backed operators, rather than the UK based private transport groups.

David Waboso reboots Digital Railway

In his Autumn Statement on 23 November the Chancellor, and former Transport Secretary, Philip Hammond announced an additional £450 million from 2018-19 to 2020-21 'to trial digital signalling technology'. Apart from wondering what there is left to trial that costs £450 million, the table with the statement added to the confusion by showing the first payment in 2017-18. And the funding for the four years totalled £535 million.

It was funding during the first two years of Control Period 6, that added up to £450 million. From this it looks as though the Department for Transport has ring-fenced money for digital signalling ahead of what will be a financially constrained funding settlement for CP6.

Fortunately, Network Rail's Managing Director Digital Railway David Waboso found time for a short briefing session following the announcement. And it is clear that where the £450 million will be spent will be prioritised by DfT and Transport for London on the basis of investment options put forward by the industry

Eight business cases for potential applications of digital technology are being worked up, five by Network Rail and the others by TfL. Network Rail is leading on schemes for the South West, Great Eastern, East Coast, Brighton and Great Western main lines.

These schemes are based on various combinations of the Digital technologies: ETCS, TM, C-DAS, ATO, telecommunications upgrade (GPRS) and data. Network Rail is due to present its business cases 'in the Spring'.

Pending that, David sees the 'critical' importance of the Autumn Statement as giving confidence to the signalling supply chain. Almost immediately after taking up his new post he began meeting the signalling contractors, both individually and collectively, as part of what he calls 'Early Contractor Involvement (ECI)

An initial report on ECI was published just after Informed Sources went to press. A key finding is that the cost of deploying digital train control could be 10-30% lower if Network Rail makes the 'radical' change from 'telling suppliers what is needed, to conversations about the issues, so that the right solutions are developed together'

Early wins

While Digital Railway Version 2.0 is booting up for the longer term, David Waboso still has the legacy of the work to date plus the need to restore the technology's credibility with some early wins.

The £28.8 million TM First Deployment contract was signed with Thales in May 2014, covering Cardiff and Romford Rail Operating Centres. Commissioning was due for the December 2015 Timetable. With the official cost now £35 million each and no delivery date in sight the aim is to get something operational pronto.

Cardiff was a mixed bag, with Interfaced TM for the Cardiff-Newport area plus Isolated TM for the South Wales line. Romford was supposed to have Integrated TM controlling c2c from December 2015, then December 2016 and currently some-time not very soon

These aspirations have been overtaken by the new realism at Digital Railway. It looks as though rolling out isolated decision tools for the area covered by Cardiff ROC makes a positive business case – although you have to ask what costs the case is based on.

At Romford, the proposed plan is to install Isolated at Upminster Integrated Control Centre for c2c during 2017, while continuing to plan the earliest possible delivery of Integrated at Romford ROC. Don't worry about the various flavours of TM mentioned above, there's a primer explaining what does what in the column.

Starting with Isolated at these ROCs should show that TM can provide something useful, building confidence in the concept and generating technology 'pull' from the operators. The ECI report claims that Isolated can produce 60% of the potential TM benefit at key junctions and intensively used lines. That sounds a trifle optimistic.

New wins

It is the extra £85 million in the last two years of CP5 in the Autumn statement that interests me. This is more than enough to fund some high profile quick wins, for Digital Railway.

Quickest would be the early introduction of C-DAS on Chiltern Railways. Chiltern's rolling stock fleet is already fitted with stand-alone DAS supplied by TTG. The Resonate (was Delta Rail) Scalable Integrated Electronic Control Centre for the route is C-DAS capable. According to Chiltern Managing Director Jake Kelly, C-DAS would show 'where Digital Railway as an idea is really beneficial'.

Proposals for a C-DAS system were submitted to Network Rail over a year ago, but we'll have to wait for the DfT to determine whether the scheme will get some of the new money available from April.

New trains will test commissioning resources

In contrast to the rising graph of new trains on order, Network Rail's Public Performance Measure has been in decline since the first Reporting Period of Control Period 5 back in April 2014. For P1 2014-15 the PPM was 89.9% against a Regulatory Target of 91.9%. Today, 34 Periods later, it stands at 87.9% while the Office of Rail & Road's improvement trajectory has taken the target for the current year to 92.3%.

Meanwhile, as you can read in this issue's Rolling stock reliability review, overall train reliability continues to improve. Without the efforts of Depots across the network over the past decade or so PPM would be even worse.

So what could possibly go wrong? A table listing future new train deliveries in the column provides the answer.

On average, between the middle of 2017 and the end of 2019 – just 30 months – over 50 new vehicles are scheduled to enter service each week. For CAF and Ansaldo there will be the additional challenge of the companies' first encounters with UK acceptance procedures. And both companies have committed to tight delivery schedules.

While manufacturers will assure you that their trains will perform perfectly from the day they are delivered, we all know that this is unlikely. Of course, once delivery is underway, it can be a case of 'count the wheels, check that everything works and straight into service', but that comes only after much blood, sweat and tears from manufacturer and maintainer sorting out the initial problems when service running starts.

A table in the review compares the early reliability of the Siemens Class 444, this year's top EMU at the Spanners awards, and the company's Class 700 fleet now entering service. It is a reminder that the bathtub curve is real.

On a visit to Hornsey depot last week I mentioned this comparison of his new trains with the Class 444 to GTR Engineering Director Gerry McFadden. He pointed out a number of mitigating factors.

First the Class 700s are 12 and 8 car formations so there are more moving parts, such as doors, to go wrong compared with a 5-car Class 444. In addition the 700 is at least a generation more advanced than its predecessor, with Ethernet transmission of control signals rather than hard wiring. And lots more code.

A valid point, but the flood of new trains will be replacing some highly reliable fleets. And I haven't mentioned availability. I'll be looking for any correlations of deliveries with TOC PPM results.

Hull electrification rejection

Back in 2006 DfT officials were never short of whacky scenarios to support their antipathy to electrification. But today the only excuse they need is being assembled in Newton Aycliffe

For example, when asked during a debate in Parliament why the Selby-Hull electrification scheme had been dropped, Chris Grayling quipped 'because the train companies got there first'.

Expanding on this bon mot the Transport Secretary explained that both, Hull Trains and TransPennine Express are acquiring Hitachi bi-mode multiple units which will be able to exploit electrified sections of route before running on diesel for the 30 miles between Selby and Hull.

A DfT letter on the Hull proposal contained what is now clearly the official justification for cutting back electrification. The use of bi-Modes will enable passenger benefits to be obtained 'without the significant disruption of electrification where passengers have had months of either complete line closure or mid-week nights and weekend closures'. DfT added that electrification 'often' requires 'associated disruptive road works where road bridges have to be rebuilt over several weeks to months to accommodate the new wires underneath'.

Roger's Blog

It's been a busy few weeks since the last blog. My visit to William Cook at Leeds took me back to my apprentice days when I had a spell in the foundry at Rugby. The company produces steel castings for railway vehicles and exports 80% of its output. Chairman Sir Edward Cook is a long-time Modern Railways reader and we had a long discussion about practical ways of boosting rail exports.

At the end of that week it was the Golden Spanners Awards at the Fourth Friday Club meeting. Guest speaker was Richard McLean of Grand Central whose talk 'Love your loco and she will love you' – based on his career in rolling stock maintenance – combined wit and highly relevant wisdom for the audience. With 260 attending the Spanners just get better and better.

As already mentioned, the following week I had an early morning briefing meeting with David Waboso of Digital Railway, before getting my head down for some serious keyboard action writing the reliability review and this column, not to mention the last Rail Business Intelligence

of 2016.

North of 10,000 words later it was up early to get to Kings Cross to make sure that this time I caught the train to Darlington for the trip to see the first UK assembled IEP rolled out at Newton Aycliffe. A very interesting first look at the new plant and I can't wait to go back and walk through the production process when assembly is in full swing. Everyone admired the traverser. There's a short video report on the event by Tony Miles on the Modern Railways You Tube channel - <https://youtu.be/PCC1dFkZ5bl>.

Last week, Siemens organised a visit to Hornsey where I renewed my acquaintance with the original depot before going to the new building ('Top Shed') where the Class 700 fleet will be maintained. I walked the length of a 12 car Class 700 noting the painted weights on the vehicle ends. Not only is it a very long train, it is amazingly lightweight given Siemens' earlier reputation.

So as well as setting the standard for quality of interior trim, Siemens has thrown down the gauntlet on weight. If any reader in Scotland can supply the painted weights for the vehicle of the Class 385 on test in Scotland we can get the 2017 'Who ate all the pies' competition going.

Nothing planned for 2017 yet, but my New Year's Resolution is to get my website back on line. Meanwhile I hope you all enjoy a happy Christmas and a peaceful new year. And, as always, we mustn't forget all those at work on renewals, enhancements and commissioning across the network as we relax with a second mince pie.

Roger