INFORMED SOURCES e-Preview May 2019

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As I'm writing this, the aftershocks from the decisions on the East Midlands and South Eastern franchises, plus Stagecoach barred from bidding for the West Coast Partnership by DfT, are still reverberating. But that is for next month. In the May column, I mainly focus on troubles in the signalling sector.

Signalling – still in crisis

Delivery problems hitting current schemes

DfT grapples with East Coast Partnership

It didn't take long for the unintended consequences of privatisation to strike. In 1994 Railtrack was launched on the philosophy that accelerating renewals would pay off in reduced long term maintenance costs. But by the end of 1998, 'Project Destiny', the result of a study by consultants McKinsey, saw signalling renewals being cut back in favour of extending asset life. Chief Executive Gerald Corbett told me at the time that Railtrack could no longer make a business case for renewing signalling because a policy of patch and mend life-extension showed a better Net Present Value.

Two decades on and it seems that not much has changed. As Network Rail's Group Managing Director Digital Rail David Waboso told me in March at a farewell chat on the day he retired, 'the work we've done starts to show that we've got to renew two thirds of our signalling over the next two or three Control Periods and at the current rate of spend it's unaffordable. You're talking £15-20 billion. And because it's like-for-like you don't get anything extra for that'.

To put some numbers on this claim, in the last 15 years (Start-CP3 to End-CP5), Network Rail has renewed around 27% of the national signalling assets. Assuming a 35 year life for an interlocking scheme, maintaining a steady state condition would have seen 43% of signalling being renewed in that time.
As a result, in the next 15 years (CP6-CP8) Network Rail needs to renew 63% of its signalling assets. Small wonder that future signalling renewals demand is referred to as a 'bow wave'.

Affordability this time round is different to 1998. Network Rail has received a substantial settlement for Operations, Maintenance & Renewals (OMR) in CP6, which started on 1 April. It is just that more resignalling is required than there is money to pay for it.

Most signalling is renewed when it still has service life remaining, so we are not talking about crumbling edges – at least not yet. For example, the signalling due to be replaced under the Trans-Pennine Route Upgrade has typically 10-15 years life remaining. The East Coast Main Line south of Peterborough is more urgent, with 7-13 years to go.

In theory, resignalling with (ETCS) Level 2 offers you extra functionality – cab signalling and Automatic Train Protection – but should cost less with the elimination of colour light signals and all their supporting cabling, power supplies and so on. And the expensive, high-maintenance, ETCS stuff, which replaces the signals and provides ATP, is on the train and off the infrastructure budget.

So far, so good. However making the case for ETCS is complicated. First, you need a route where signalling renewal is imminent. Next, the majority of traction on that route has to be ETCS fitted, or at least have passive provision for fitment.

Having got these aligned you need a good length of route requiring signal renewal. Drivers switching back and forth between multiple-aspect and cab signalling is not a good idea.

While several potential ETCS resignalling schemes are being evaluated, the first project will cover the East Coast Main Line between King's Cross and Peterborough. This ticks all the boxes: the signalling needs renewal; the LNER, Thameslink and the open access fleets will be ETCS fitted; and it's a continuous run.

Delayed signal commissioning case history

While waiting for ETCS, 'conventional' re-resignalling projects are still being delivered and currently we have a mini-crisis, with commissioning delayed on several schemes. Take the replacement of mechanical boxes and manned level crossings on the Ferriby-Gilberdyke section between Selby and Hull.

When the contract was announced in February 2016, commissioning was scheduled for April 2018. However by September 2017 Informed Sources were reporting that the contractual commissioning date was unlikely to be met.

Testing over the weekend of 20/21 January 2018 was due to inform a 'Final Review' of the viability of commissioning on 2 April. In the column I recount the subsequent series of inconclusive 'Final Review' meetings during January and February.

At last, the final Final Review meeting on 27 February 2018 confirmed that the April commissioning would not go ahead, due to use of 'new and novel equipment' in the UK industry for the first time which meant that there was still 'a significant amount' of testing which needed to be completed.

In today's railway, a decision to defer a signal commissioning is not taken lightly, hence all those Final Review meetings. The necessary possessions for the commissioning will have been booked a year in advance and attract the payment of compensation for operators under Schedule 4.

There is a limited pool of signalling Testers, particularly Testers in Charge (TIC). If one falls sick, as on another recent contract, the commissioning may not go ahead.

However the 77 hours of disruptive access over the Easter weekend, already booked for the commissioning of Ferriby-Gilberdyke, would still be needed to continue the testing. A further 29 hours of access in May 2018 would be available for additional testing.

Yet another Review in March revealed that to complete the works, in addition to the possessions already mentioned, a further two 52 hour weekend possessions would have to be agreed with the train operators. Don't forget that the TOCs and FOCs had been planning their future operations on the basis of having an unrestricted railway from April 2018.

Various dates were considered and the preferred option put to the TOCs. By the end of July everyone was on board, Commissioning went as scheduled and the resignalling came into service on Monday 26 November.

But if conventional re-signalling is unaffordable, such delays can only increase the overall cost.

East Coast Partnership options

When DfT's Operator of Last Resort took over Intercity East Coast, following the failure of the Virgin Trains East Coast franchise, Transport Secretary Chris Grayling announced that the replacement would be an East Coast Partnership (ECP) 'bringing together the operation of track and train under a single leader'.

Obviously, the East Coast Main Line is the last place you would trial a vertically integrated railway. No doubt the members of the East Coast Partnership Board responsible for devising the scheme knew that. But undeterred they carried on and have come up with four Commercial Models (CM).

Starting with the most basic level, CM1 offers an enhanced alliance within the industry structure. Given that we don't know what structure will emerge from the Williams review, I'll leave it at that.

CM2 is a bit more exciting. DfT's client role would be reorganised into a separate body called the East Coast Partnership Company, ECPCo for short. ECPCo would be an 'office' of the DfT.

This option, claims the Board, would provide 'clearer funding, direction and accountability to London North Eastern Railway (LNER) and the Network Rail East Coast Route (ECR). ECPCo would procures the Train Service Operator (TSO) and also negotiate a tripartite agreement with the TSO and ECR which would bring track and train together. This structure is described as 'similar to the Strategic Rail Authority (SRA) model, but with contractual engagement with the ECR.

With the next progression, CM3, a new holding company (ECP HoldCo) would be responsible for track and train. The company would have clear 'direction, funding and accountability for train operation plus planning and delivery of Operations Maintenance Renewals & Enhancements (OMR&E)'.

Track and train would still be separate activities under the HoldCo and the infrastructure would remain in public ownership. According to the Board, CM3 is similar to Transport for London and the Overground, on the basis that TfL owns the Infrastructure and contracts out train operations.

Finally, CM4 sees 'track and train brought together in one private sector concession. Infrastructure and operations would be the responsibility of yet another unpronounceable abbreviation, ECP Concessions Ltd (ECPCL), with staff transferred from Network Rail. Infrastructure would remain in public ownership but ECPCL would be free to decide which services to contract out. It is described as similar to High Speed 1 but with the inclusion of train service operations.

A qualitative appraisal has been made which matches the four Commercial Models against eight Critical Success Factors. This ranks the four Commercial Models on a one to three star basis. Only CM4 gets a uniform three stars across all factors.

As for a possible programme and timescale, the Board suggests that you could get to CM3 or CM4 either via CM2 or start with CM1 and build up. Assuming that CM1 is skipped, CM2 could be in place in 2021, which seems a bit optimistic. Given that the process is unlikely to start until Williams has reported and the Government of the day has decided what to do – if anything – with his recommendations, we're looking at the end of 2022 rather than 2021. After that the Board reckons you could get from CM2 to CM3 in two years and CM4 in 2026.

What this work by DfT, Network Rail and LNER shows is that there are ways to create a vertically integrated functioning railway by around the end of the new Control Period 6. But not on the ECML.

New Train TIN-watch

Having last month come straight into the Table of Truth in third place, ScotRail's Hitachi Class 385 electric multiple units banged in a 50% improvement on their inaugural Miles per Technical Incident (MTIN) to take second place on Moving Annual Average (MAA)ahead of Siemen's Class 700 Thameslink fleet, albeit by only 64 miles.

So an interesting competition is building up – especially as both companies have far more reliable older trains in service with other operators.

Incidentally, the CCTV 'fix' which took the Class 700s to their present level was another software issue corrected.

Also in the column I provide an update on the delivery schedule for the LNER Intercity Express Programme (IEP) fleets. LNER should have all 13 of its Hitachi Class 800/1 9-car Bi-modes accepted by 2 May - in good time for the 19 May timetable change. LNER is planning to use the first nine sets to cover six London-Leeds diagrams.

Last month's Modern Railways feature on LNER, confirmed that the new IEP timetable, featuring 13 paths every two hours including an hourly 4 hour London-Edinburgh headline timing, will not now be feasible until December 2021. This is due to infrastructure constraints.

LNER has firm rights to its additional hourly path from May 2021. Rights from May 2019 were contingent on the infrastructure upgrades and rolling stock being available.

ORR also gave LNER firm rights for a two-hourly Middlesbrough service, also from May 2021, with contingent rights from May 2020.

FirstGroup was seeking five daily London-Edinburgh paths each way. ORR approved this application, with firm rights starting in May 2021. This was conditional on the necessary rolling stock being ordered. The contract for five 5-car Hitachi AT300 EMUs was placed on 22 March for delivery in ‘Autumn 2021’.

Rogers Blog

Well, there I was packing my for my trip to Derby the next day, when informed sources reported that Abellio was going be announced as the winner of the East Midlands franchise in the morning and Stagecoach would also be barred from the South Eastern and West Coast Partnership franchise bidding on the grounds that it had submitted non-compliant bids for all three competitions.

Next day was press day at Modern Railways and our editorial was focused on the problems facing the East Midlands franchise, which were being exacerbated by the delay in making a decision. So at an early morning phoned-round we decided to re-write it, with me adding my two penn’orth from the train via my smart phone. Real ‘hold the presses’ stuff.

As a result, readers will have the salient details in the magazine this week and I will be making a detailed analysis for the June Informed Sources. Having watched a hapless Transport Minister floundering under a barrage of some well briefed questions in Parliament, I can sniff an action replay of the 2012 Intercity West Coast franchise award scandal in the making.

Anyway back to the blog. At the end of March the Waterfront ETCS conference was as informative as ever. The presentation giving the international perspective was particularly interesting as I sensed, for the first time, a growing acknowledgement that interoperability is not proving as easy as was expected.

Next evening, Angel held their 25th Anniversary celebrations at Mail Rail. I arrived early and enjoyed a ride on the former Post Office Railway before the serious networking began. I first had contact with the Post office Railway when I was at English Electric – but for the public service they have some new trains.

At Derby, Park Signalling was launching their new Maintenance Terminal for SSI technicians and I had been asked to say a few words. Wearing my SSI 21st Anniversary tie, I gave a brief history of SSI from the pilot at Leamington Spa in 1985 to the latest installation at Lewes.

I then outlined the current signalling renewals crisis, which will mean SSI remaining in front-line service for at least another two decades. Improvements like the new Maintenance Terminal will help make the most of the 450 odd SSIs controlling today’s busy railway.

At the end of the month the Modern Railways 4th Friday club is in Manchester and then in May it’s Railtex. I’ll be there on the opening day (Tuesday) pounding the aisles as usual. If you see me, do stop me for a chat.

Meanwhile, with the East Mids story building up, I’m going to have to work out what to cut from the June column.

Roger