Informed Sources e-Preview June 2016

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I'm writing this having returned from a few days holiday in north west Norfolk. Various things have happened while we've been walking deserted beaches, looking at old churches and exploring King's Lynn, including an update of DfT's Franchising Schedule which always has something of interest to analyse.

Traffic Management – why are we waiting?
Rolling stock market faces uncertain times
Smart Ticketing – DfT goes Maoist

One of the attributes this column relies on is the ability to hear dogs that aren't barking. One of these silent mutts cropped up in a presentation by Martin Arter, Network Rail's Programme Development Director, Digital Railway (DR), to the All Party Parliamentary Rail Group in April. On the subject of the Traffic Management System (TMS), a screen included the line 'August – October 2016: Traffic Management at Rail Operating Centres in Romford and Three Bridges'

In May 2014 Thales was awarded two TMS 1st Deployment contracts covering the Wales Rail Operating Centre (WROC) at Cardiff and the new Romford ROC. Commissioning for both was scheduled for December 2015. So where had the WROC gone?

By March this year, it had become apparent that two signalling schemes, the late-running Cardiff Area Signalling Renewal (CASR) and the forthcoming Bristol Area Signalling Renewal & Enhancement (BASRE) would hit installation of TMS at WROC. In addition to the TM depending on the design data from CASR, the possessions required for commissioning CASR Stage 5 in December this year, plus BASRE, meant that TMS would have to wait.

That is the official version. But why should connecting Thales' ARAMIS TM system to the existing Siemens WESTCAD work stations at WROC be such a palaver?

It didn't clock at the time, but both Thales' 1st Deployment TMS contracts are for a complete control system. In other words, in addition to its own kit Thales is also providing an upgraded version of WESTCAD, known as WESTCAD-E.

Controlguide WESTCAD-E, to give it its full title, allows for true area of control movement between multiple workstations, The hardware and software includes workstation computers and server systems. Automatic Route Setting (ARS) is also provided. I'm having a hands-on session with WESTCAD-E next month.

Options
This need for complete replacement of the existing WESTCAD as part of TMS compounds the clash with CASR and BASRE. As a result, NR has been looking at options for TMS at WROC which even include cancellation.

But given the reputational risk to this flagship Digital Rail scheme, a more politically acceptable solution to the Cardiff conundrum would be an immediate pause, followed by commissioning TMS in August 2017 after CASR and BASRE were completed. But even that is not as straightforward as it seems.

Replacement of the existing WESTCAD equipment, could be avoided by limiting TMS to 'Isolated', available from August next year. Whether Isolated, which just provides scheduling advice to signallers, justifies spending tens of millions is debatable.

A decision on what to do about WROC was due to come before Network Rail's Investment Panel on 20 May - as I was driving home from Norfolk. More on what happened, or didn't happen, in a future column.

Change
If TMS were not difficult enough NR's aspirations go beyond managing traffic. There is also 'Process change', which is about removing layers in operation of the railway. I described an example in last year's article on the IECC Scalable at Marylebone.

Currently the interface between Network Rail and Chiltern on changes to the day's plan is paper-based. Why not eliminate this by giving Chiltern direct access to the IECC Scalable Train Timetable Processor (TTP)? The operator would then be responsible for making any changes during the day, with the Enhanced ARS running the schedule.

That's been under discussion for a year now. You have to wonder if NR is serious about real world TMS at times.

This leads into another TM benefit referred to by NR as 'People change'. For example signalling, as in manual route setting, is replaced by Dispatch Management using a train graph with what TMS calls Automatic Routing. Once again, this is nothing new.

What is interesting is that the demonstration of the Thales TMS suite I saw, revealed that the system was being operated by hard core signallers who were using its facilities to streamline their usual operating practices, rather than as a new business process.

Romford
Anyway, with WROC postponed at best, the proof of the TM pudding is now going to be at the new Romford ROC which will take over control of what used to be called the London Tilbury & Southend (LT&S) lines out of Fenchurch Street, currently controlled from the Upminster IECC. Commissioning is scheduled for 13 November.

While the Thameside interlockings will remain at Upminster, control will be from new WESTCAD-E workstations at Romford This is a pretty radical change for operator c2c, bearing in mind that WESTCAD-E is untried.

However, the TMS functions will not be introduced until after Romford has settled down. And, initially, the functionality of the Thales ARAMIS TM will limited to that specified for the demonstration office.

NR expects that signallers will use the ARAMIS dispatch management screen, reverting to the WESTCADE-E workstation screens only for manual signal control. As NR puts it, route control for LT&S will be supported primarily by the new TMS 'with some aspects of conventional system functionality retained'.

system functionality retained?

Put another way, 'the present tactical decision making by the signaller based on train positions on track diagrams [will migrate] to strategic manipulation of the live timetable plan'. Signallers can no doubt think of many routine operations, that might be a tad difficult using a train graph. Setting a group of signals at danger for emergency repair work for example.

Liverpool Street, the pioneering IECC, is due to migrate into Romford, eventually, but is currently being upgraded to Scalable as part of Alstom's Great Eastern resignalling to support Crossrail. That could provide some interesting real world comparisons.

Needed now

What is clear that NR's TMS is not going to deliver anytime soon. When it comes to technology I am an incrementalist by nature and the rush to TMS reminds me of Intercity rolling stock policy in the 1960s.

For TMS read the Advanced Passenger Train, with its all-new technologies aimed at transcending the limitations of the existing railway in a single bound. For the parallel with HST, which combined state-of the art equipment to produce a train greater than the sum of its parts, look to IECC Scalable.

In the column I compare TMS with IECC Scalable and conclude that, apart from Process and People change, Scalable could provide most of the benefits now and for a lot less than the cost of bolt-on TMS such as the Hitachi system, for Three Bridges.

If the Digital Railway Programme could switch from APT-mode it could make a heck of a difference to the here and now railway. Expediting the upgrade of Marylebone to reflect the original title behind the abbreviation – Integrated Electronic Control Centre – by integrating more TM facilities such as plan/re-plan, platform occupation, possession planning, C-DAS, and stock and crew management would cost low single figure millions.

And because the new features would be added to a working system, technical risk would be minimal – rather like the way Siemens overlaid the new Victoria Line Automatic Train Operation system, on the existing interlockings so that the trains kept running during installation and commissioning.

Remembering that Great Western's Thames Valley Control Centre at Didcot is based on IEEC Scalable, a Marylebone pilot scheme could lead into TMS as part of the current Great Western Main Line resignalling programme. Let's hope the arrival of David Waboso to head up NR's Digital Railway Programme leads to an outbreak of common sense when it comes to TMS.

New challenges for rolling stock market

As I explain on the column, the modern perception is that the Rolling Stock Companies (ROSCO) were sold off for a pittance and turned out to be risk-free money machines. Well, I was there at the time and only four serious bids were received, three of them from Management Buyouts. In the case of the consortium I was advising, the high street bank providing the finance pulled out two days before bids were due to go in because the Chairman through the deal too risky.

Since then, with continuous ridership growth outstripping capacity, pretty well everything on wheels has been in demand. As the Table in the April Informed Sources showed, between now and the end of the current Control Period 5 in March 2019, some 4,000 new passenger vehicles are due to be delivered. While 60% of these are state procured and funded – the Intercity Express Programme (IEP), Thameslink and Crossrail fleets - 1500 are being privately funded, around 1000 of these by the ROSCOs.

Meanwhile, new train prices are falling, thanks to a combination of large production runs and operators going for lower specifications. Even better, the cost of funding for new trains has been slashed.

So cheaper trains costing less to lease; what's not to like? As ever, the rolling stock market is not as straightforward as it seems.

Deadline

First of all, there is the 1 January 2020 deadline for all rolling stock to be compliant with the accessibility regulations derived from the Passengers with Reduced Mobility – Technical Specification for Interoperability (PRM-TSI). That is just over 1300 days away

Already ex British Rail multiple units are being made PRM-TSI compliant during C6 heavy overhauls. But that expenditure is taking the risk that operators will want to keep these trains in service after 2020.

To mitigate this risk, the ROSCOs are choosing to double up the bet by investing in upgrades to make the trains even more attractive to both passengers and operators. Thus Eversholt has begun upgrading the Greater Anglia Class 321 fleet under the Renatus programme, with retractioning with three phase drives an option. Similarly with Porterbrook's retractioning of South West Trains' refurbished Class 455 fleet.

Sounds reasonable until to you combine more-affordable new trains with DfT's weighting for quality in franchise bid evaluation. As Transport Minister Claire Perry said in a written answer on 10 May, the specification for the replacement Anglia franchise requires bidders to include 'high quality rolling stock' in their offers. She added that 30% of the available quality points from the franchise evaluation will be awarded for rolling stock improvement plans, 'the highest level in any franchise'.

With cheap new trains at rock bottom lease rentals it seems certain that replacing Anglia's Class 317s, and perhaps the Class 321 fleet, could be a winning move. And why stop at the ex-BR EMUs? The Class 360s are getting on too.

Franchise award is due next month, when all should become clear. And South Western could change hands next year. With FirstGroup bidding against Stagecoach, could replacing the Class 455 fleet be another winning strategy?

There is one further complication. With just over 1300 days to the PRM-TSI deadline, we should remember that even off a live production line it will be difficult to start delivery of a new order in under two years. Late delivery of orders scheduled for completion in 2019 could see operators breaching accessibility legislation.

Ironically, while Transport ministers insist that rolling stock procurement must be left to the private sector, inside DfT civil servants are busily trying to allocate scarce resources. Without the 2020 PRM-TSI deadline, this clandestine Fat Controller operation would not be a problem. But in the real world DfT needs to come clean on future use.

Apart from the risk of having to obtain PRM-TSI derogations to keep services running while replacements are delivered, fear and greed

traditionally rule the market. Fear could see stock being scrapped to save expenditure on long-term maintenance which might turn out to be nugatory.

Smart Ticketing – DfT turns to the market.
As reported in the March 2016 Informed Sources, after spending £37 million on its flagship venture, the South East Flexible Ticketing Scheme (SEFT), the Department of Transport had handed over responsibility for the future development of smart ticketing to the private sector. On 31 March, the scale of the retreat was revealed in a letter to ITSO Chairman Mike Fuhr from Jenni Borg, Head of Transforming Ticketing, Payments & Mobility (TTP&G) at DfT.

According to Ms Borg, her unit had been 'disaggregated'. Actually, news of this disaggregation with extreme prejudice, came at the very end of a letter extolling the achievements of TTP&M.

When the letter finally got round to the news that the parrot was indeed dead she explained that 'there remain significant challenges around governance, commercial and regulatory requirements to support transformation and benefit realisation' from smart ticketing. This was why DfT had decided that 'now is the time to disaggregate the team so that our important work is more effectively mainstreamed with other bus and rail industry management'. A challenge ducked then.

An organisation chart with the letter, showing the post disaggregation structure, confirmed that DfT has given up on any idea of what travellers really needs – a national approach to transport smart cards. Instead, as Chairman Mao nearly said, the new policy is 'let a thousand smart cards bloom'.

Responsibility for SEFT and the joint DfT/Transport for London ITSO on Prestige (IoP) programme has moved to Rail Passenger Services (RPS), under Peter Wilkinson. Ditto Rail Smart and integrated ticketing policy plus the specification and oversight of delivery.

Regional activities have been devolved, with DfT effectively keeping a watching brief. Note that when the letter talks of 'responsibility', this refers to responsibility within DfT organisationally, which not the same as DfT being responsible for. For example, the unspent portion of the SEFT budget has been returned to the Treasury.

To give Jenni credit, her one real achievement was the creation of the only ITSO compliant smart card back-office 'that meets the latest rail standard and has the capability to support every train operator in the country'. In addition to current ticket types it could also handle new products such as carnets. Abellio Greater Anglia is already using this back office. c2c and Southeastern are being added later this year.

Of course, as remarked in the March column, the real tragedy is that the 'passenger benefits' are spread over a growing number of operator-specific, curiously-named ITSO compliant smart cards when, if you are serious about smart ticketing, the ideal remains a national card. The overwhelming drawback is that passengers don't know where their operator-specific smart card can be used outside its 'home' network.

For example, I found a card reader tucked away on Welwyn Garden City station the other day. Presumably it is a reader for Great Northern operator GTR's the key. But if I had a key card, could I use it for a day out in Brighton?

Meanwhile, new technology is overtaking the smartcard, mobile phones for example and bar codes. And I'm not the only one who thinks the printed ticket with magnetic stripe still has a lot going for it on practical grounds.

With DfT disaggregated it is hard to see who is going to bring order to this Game of Cards.

Roger's blog

Infrarail was a great day out. I met several new companies, well, new to me, with a couple of interesting stories to follow up. Several existing contacts had exciting new products. And in between visiting stands signalling informed sources were everywhere. Add in meeting readers, one of whom who had bought every copy of both Modern Railways AND its predecessor Trains Illustrated, and you can see why tramping up and down the aisles is never the chore it might seem.

The following week I drove over to Stevenage for an update and site visit on the ECML traction Power Supply Upgrade, a fascinating morning away from the desk. Then, the week after that, I gave my Gresley Lecture to the Institute of Measurement & Control in Luton to a packed house. Finally I spent an evening with the Cuffley Industrial Heritage Society talking about what's happening to railways locally.

This Tuesday it's the launch of the Thameslink Class 700 EMU which should give me another chance to pit the fist of quality against Siemens echt Deutsch craftsmanship. June opens with a trip to Birmingham, travelling with Chiltern after too long an absence, to play with Siemens' new WESTCAD-E. And I have just had an invitation from Network Rail for later in that week for an update on Digital Railway.

After that it's heads down writing until the Modern Railways Innovation Awards on Friday 24 June, another of the awards we combine with a Fourth Friday Club meeting. And June ends with the Stagecoach Summer reception, which, as ever, will test my ability to hold a notebook, pencil, glass of champagne and a canape while taking intelligible notes.

Now to catch up with what's been going on in my absence.

Roger