

## **New powers in the land**

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The entire series is available at [www.iosis.co.uk](http://www.iosis.co.uk).

This is the 10<sup>th</sup> paper in the 'Almost Always Connected' Series of papers about ticketing and journey management for surface and sub-surface public transport in the UK.

### **Introduction**

The production of this set of now 10 papers, on topics in ticketing and journey management on UK surface and sub-surface public transport, started in late 2015 following the realisation that development of internet connectivity and associated services was moving very rapidly, and that the associated costs were significantly reducing. On the assumption that technology development would proceed apace (and costs fall equally quickly), a phrase about the future, coined in the 2<sup>nd</sup> paper of this set, was:

'The passenger travels in a personal distributed data cloud.'

At the time of writing that sentence:

A large cohort of the travelling public already had smart devices, but technical risks around their use for ticketing and journey management for public transport (particularly in the area of information security) remained to be dealt with. Also costs of systems, costs of development and of deployment, particularly in the area of providing public transport vehicles with the necessary quality of internet connectivity, were too high. Implementing the concept in the operating environment of public transport was therefore infeasible.

Also your author could not see how operators of public transport services could formulate a business case for developing and deploying the commercial IT systems needed to make a real difference to public transport, hence the reference in the 2<sup>nd</sup> paper to the passenger's not-at-the-time-realizable 'personal distributed data cloud'.

So rapid has been technology development since paper #2 was developed that the author believes it is now feasible to commence thinking and planning for large scale deployment and use of smart devices and smart systems in direct support of both public transport operators and their passengers. One year on from the 2<sup>nd</sup> paper, cloud computing is clearly the vehicle (sic) to use for ticketing and journey management, not just for single and return tickets but also for multi-modal, multi operator, end-to-end journeys. The resulting environment needs to be secure,

reliable, customer friendly, and cost effective. It has to provide a support service across multiple surface and sub-surface public transport operators.

The passenger facing concept introduced in the 2<sup>nd</sup> paper remains the same: *data* now to be held in the cloud is about the individual's or group's journey, and is expected to be *pushed* ahead of the vehicle in which he or she or they travel, as well as being available to the passenger and, for heavy rail, available to a Train Manager or Inspector as the journey proceeds, to staff at entry to and exit from the public transport network, and at interchange points in the that network. The information will be capable of being of being archived for later reference.

As 2016 progressed, it became clear that:

Availability of large scale secure and reliable cloud computing, at low cost, will be the enabler of a national ticketing and journey management scheme for surface and sub-surface public transport in the UK.

One year on from the first of these papers, the author senses increasing awareness of the *possibilities*, but, as yet, no sign of *collaborative development*, let alone *deployment across multiple public transport modes, operators, or regions*. During that year, the 9<sup>th</sup> paper in this series 'Working Together' dated August 2016, had tried to trigger some movement: it proposed a discussion among operators of public transport, and then maybe something of a conference, perhaps convened by ITSO Ltd. The topic for discussion would be unifying the underlying technology supporting ticketing and journey management for surface and sub-surface public transport in the UK. But, by autumn last year, there were other considerations for UK operators of public transport, not least DfT's withdrawal from direct promotion of related technology development, along with the Dept's exhortations to the heavy rail sector to introduce smart ticketing for UK heavy rail ASAP. If that was not enough to cope with, central government announced that, for heavy rail passenger services, track providers and train operators must start to work much more closely together. No representative group discussion about ticketing and journey management took place.

But something else was creeping up on us, and so::

The author contends that the recent developments in the Westminster government's approach to surface and sub-surface public transport, together with *staged UK wide transfer of power to devolved administrations*, provide a major opportunity for a step change in the passenger experience on public transport.

In September of 2016, ITSO's Board did not pick up the baton offered in the 9<sup>th</sup> paper in this series (Working Together). ITSO's General Manager did not set up a conference. But, for the operators of the rail public transport mode, and perhaps later for the passenger, something different happened: the Rail Delivery Group (RDG) responded to government's spring 2016 exhortation to improve ticketing and journey management but only for heavy rail, i.e. not universally multi-modal. One month into 2017, we saw that RDG has decided to increase fragmentation of the scene by introducing yet another technology: a new type of bar coding that will create tickets that can be scanned by showing your smart mobile device to yet another type of bar code reader that is to be incorporated into existing ticket gates.

Such diversification is, however, not a problem if the concept of a national, cloud computing based support methodology is taken forward. Indeed, that there would be multiple sector specific, region specific, operator specific, even route specific deployments of a variety of smart ticketing was expected as this series of papers was developed. Thus these papers are written with the expectation that such schemes will continue, flourish, and further proliferate. This paper therefore introduces a new concept on behalf of the passenger who uses surface and sub-surface public transport in the UK: managing the end-to-end journey, no matter how many journey legs and operators are involved. As I put it to a friend who was at the time regularly making a journey to visit an ailing relative, a journey involving 3 operators and 3 tickets in each direction:

Would you like to have a single public transport ticket that takes you all the way from the bus stop near your flat and place of work to the family home many miles away, and then back again a couple of days later?

Her eyes lit up as she emphatically said 'Yes'.

At the start of February 2017, RDG has sprung a welcome big surprise on us: a program to rationalise ticketing for heavy rail, so that purchasers of rail tickets are to be promised automatic 'lowest price' tickets for their journey. Dare one suggest that DfT's withdrawal from detail involvement at this level has freed the industry to put the passenger first?

At a different level, there are new powers in the land: devolved administrations, keen to see improvement in surface and sub-surface public transport. There are 2 levels of those:

Existing regional governments: Scotland, Wales and Northern Ireland.

Devolved English Regions, of which the North is the most advanced in public transport matters, having recently applied to have sub-regional transport powers delegated to their organisation 'Transport for the North'.

How, then, do we proceed? ITSO Ltd of course demonstrated a new way of working: interested parties joined together in the setting up and operation of a non-profit-distributing Membership Company. ITSO also had direct central govt support, in cash and in kind. But ITSO Ltd is an enabler (in various ways), not an operator of public transport: it supports public transport operators and organisations such as the PTEs, rather than being a central operator or scheme developer. This time we need a large development and operating organisation: it could still be non-profit-distributing, and it could be owned by its Members (the operators of public transport, and the devolved administrations). Or, at the other extreme, there could be one or more straightforward joint stock companies with shareholders.

An End Note for this 10<sup>th</sup> paper: The EU has for some time been working on harmonisation across the heavy rail mode of public transport. Links to the ticketing material and other topics have been received and are yet to be studied in detail.