

ENGLAND TURNS SMART WITH NATIONAL CONCESSIONARY TRAVEL SCHEME



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English National Concessionary Travel Scheme

With a host of English Travel Concession Authorities (TCAs) venturing into the world of travel smartcards after April 1, 2008, the pressure is on to make sure the six million-plus membership scheme goes to plan. With this in mind, ITSO has been adopted to provide the common technical specification behind the nationwide scheme. As an existing and proven specification, ITSO was an obvious choice for not only providing the English National Concessionary Travel Scheme (ENCTS) specification but providing a platform for other products to be used from the same smartcard.

The origins of ENCTS

The introduction of concessionary fares through the ENCTS, whereby specified groups of people are identified for discounted or free travel, is not exclusive to this year. In 2000 a statutory half-fare minimum concession was introduced for pensioners and the disabled, and in 2006 the statutory minimum was increased to full free local travel. On November 27, 2006 the House of Lords introduced the Concessionary Bus Travel Act, which received royal assent to become an Act in July 2007. It stated that those over

the age of 60 and disabled people in England would get free off-peak travel on local buses anywhere in England from April 2008.

One of the main contributors to the success of the scheme is via its technical specification (ITSO), which has been designed to provide secure interoperability through its common design features. The U.K. Department for Transport's Framework Agreement was set up to allow authorities to procure the services required in order to issue smartcards for concessionary travel. Split into four lots, it covers aspects such as card production services, card management services (CMS), back office provision (known as the Host Operator Processing System or HOPS) and in-house production equipment. With both neighbouring Wales and Scotland already administering their own national concession scheme, their English counterparts have observed both schemes closely before going live in April. However, ENCTS was always likely to prove a big challenge for all involved, owing to the sheer numbers of the cards to be issued and the decentralised set up of the scheme. As there has been such a demand of cards over such a short period of time between August 2007 and April 2008, the mass production of ITSO cards scaled new heights. With over 5.7 million cards created for rollout on the

April 1, 2008, the pressure was on to ensure that data was processed quickly and accurately. During peak periods, some 800,000 data frames were being processed per day, equating to some 106,000 smartcards being created each day for the TCAs using ITSO Services alone.

The advantages of smartcards

Smartcards provide a significant number of benefits to both the card holder and the background processes involved. Fraud in particular is a threat that is significantly reduced as cards are almost impossible to copy; whilst cards that are lost or stolen can be identified easily and removed from the system, the result being that they are of no use to anyone once they have been deactivated. Smartcards can significantly reduce boarding times, particularly when combined with card-readable Point of Service Terminals (POSTs), subsequently reducing driver workload, journey times and removing a potential monetary transaction element from travel.

Travel Concession Authorities benefit from the wealth of information that is readily available to them. Full smart ticketing schemes can provide more data on journeys taken with greater accuracy; this can assist



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in the reimbursement arrangements with operators to ensure that all payments can be fairly administered. Travel information can also be shared with operators to identify patterns of travel that can lead to improvements in vehicle deployment. For operating companies who in the past have spent large amounts on surveys to establish travel patterns for their services, this readily available information can remove or reduce the need for such surveys and reduce annual operator expenditure.

The ITSO specification has another significant advantage for the cardholder, its potential compatibility with other types of services such as library services means that it can be used in a variety of situations.

ITSO – universal interoperability

Originally conceived in 1998, ITSO is a non-profit distribution membership organisation, whose members include bus and train operators, industry suppliers, the Department for

Transport and regional and local authorities. Its objective is to facilitate the development of an interoperable smart environment through the development, operation and management of an interoperable smart media environment. The ITSO Specification is Crown Copyright. As a “live” Specification it get updated from time to time. The current version, very recently published is Version 2.1.3, which includes some special new features to facilitate ENCTS operation.

The ITSO shell on a smart customer media (a smart card or maybe some other smart device) provides the opportunity for to store multiple products, meaning that an ITSO card could also be compliant with other schemes such as library or identification cards. ITSO embraces a multitude of existing smart platforms, which vary in terms of their suitability for specific schemes. All of the platforms are contactless, a necessity in the transport sector, as they are quicker and easier to operate than contact counterparts.

Operational criteria

Through the ITSO Secure Application Module (ISAM) and the Security Subsystem, the ITSO specification provides a wealth of functions, such as secure key distribution and storage for product management and usage; the issuing and acceptance of products from a number of providers and retailers; validation of card and transaction data, 4MB of secure data storage and an environment (known as lossless) where all data transactions reach their intended recipient without being lost or tampered.

ITSO Services Ltd

Due to the sheer quantity of TCAs across England, it is only natural that different levels of implementation would be required. Invariably some TCAs are more advanced in their development of fully integrated smart schemes than others. In order to ensure that those TCAs who lag further behind are catered for, ITSO, with the DfT's agreement, created ITSO Services Ltd (ISL). Set up in October 2007, ISL's main objective is supporting non-smart TCAs (authorities who are not fully integrated into the ITSO environment in a fully smart fashion as yet), acting as the licensed operator on behalf of non-smart TCAs, providing ISAMs for Personalisation of smart passes, and giving guidance and direction on issues such as stoplisting and asset management.

Between December 2007 and March 2008 ISL integrated six card production bureaux into the ISL system, ensuring that the 253 TCAs are supported by ISL, plus the 4.2 million-plus cards that have been produced so far for them, are ITSO compliant. Considering the overall numbers of smartcards that have been produced so far (including 1.5 million cards for England's six smart schemes – Merseytravel, Centro, GMPTE, Cheshire, Nottinghamshire and NoWcard), the setup and integration processes undertaken so far have been hugely successful. Merseytravel Chief Executive and ITSO and ISL Chairman Neil Scales spoke of ISL's success:

"ISL took on the enormous task of integrating card bureau suppliers for the majority of the TCAs as, for many, this was the first time they had integrated with a live ITSO HOPS. ISL also facilitated the provision of ISAMs to bureaux and TCAs. To date more than 800 ISAMs have been profiled, all with a compressed timescales of just under five months, which is a phenomenal achievement."

"ISL is delighted with its HOPS/AMS supplier, Applied Card Technologies (ACT), which has provided a first class managed service, the ISL HOPS is now the largest operational HOPS/AMS anywhere in the UK. This has been a huge success for ISL, the Department for Transport, suppliers and TCAs and I pass on my sincere thanks to everyone who made

it happen. This is an exciting time for ISL and I speak for many when I say that we are proud to be at the forefront of this technology. Smart cards will jump-start the digital economy and help modernise the way millions of people use public transport."

ITSO Services Limited provides a Concessionary Pass Transaction Data Repository, enabling non-smart TCAs and TCA Groups to issue ITSO compliant Concessionary Passes to eligible holders. When a non-smart TCA migrates to smart, it will become an ITSO member in its own right with its own operation systems.

of Service Terminals, non-smart TCAs will be able to see the advantages that going smart can have to their daily management of their concessionary knowledge. With more TCAs ready to become fully smart over the coming year, the future looks bright for ENCTS as England jumps to the forefront of the smartcard revolution ●

*Helen Mitchell, head of business development
Anthony McLaughlin, business support officer, ITSO*



ENCTS – the future

With the National Concession Scheme now in full swing, the coming months will reveal the potential impact smartcards can have on the evolution of public transport smart ticketing. The Department for Transport plan to introduce a higher subsidy rate for operators who install ITSO smart ticketing, GPS equipment and associated back office systems. With greater emphasis being placed upon the installations of smart Point