DEVELOPMENTS IN TICKETING ACROSS NATIONAL RAIL

Introduction

Until recently, ticketing on National Rail had remained largely unchanged since the early 1980s. Even now, the familiar orange and yellow magnetic stripe ticket remains the mainstay of ticketing on the railway in Great Britain. It has been estimated that since their introduction, over eight billion of these credit card sized tickets, provided through a contract which ATOC manages, have been issued.

Recently, however, several new forms of ticketing have been either introduced or trialled on National Rail. This paper provides an introduction to these developments.

e-ticketing

This term includes self-print ticketing, which follows the airline model by allowing customers to print their own tickets at home, and ticket to mobile, which is similar in concept but sends the ticket to a customer's mobile phone. ATOC has developed standards in these areas to ensure that consistent formats are in place as train companies adopt these new approaches.

These forms of ticket are currently restricted to advance ticket purchases linked to a specific train and seat booking, to limit the obvious fraud risk. They show enough information to allow visual inspection by railway staff but they also include a barcode (to an ATOC specification) which can be used for automated inspection - at passenger gates for example.

In the future it is hoped to extend the use of e-ticketing, although this will require the ticket inspector to validate the ticket by accessing an online database of ticket sales.

Smartcard ticketing

Smartcard ticketing uses cards similar in size to bank cards and allows 'touch in, touch out' style travelling. A chip in the card stores the travel rights of the customer and confirms these as the card is passed over a reader at a gate or other point of validation.

The proprietary Oyster card system in London is a successful implementation of smart ticketing. Oyster has also introduced the Pay As You Go travel principle in the UK where the customer uses monetary credit on the card as he or she travels rather than buying a conventional ticket. Travel expenditure is also 'capped' by the system to ensure the cheapest fare for all the journeys made in a single day is applied. From January 2010, following extensive discussions co-ordinated by ATOC on behalf of the train companies, Oyster was be extended across all National Rail services within the Greater London area and has proved extremely popular.

A different kind of smartcard ticketing is that based on the 'ITSO' standard. Whilst ITSO cards look similar to Oyster, they use an open data standard defined by ITSO Limited, an organisation funded by the Department for Transport (DfT). ITSO has been designed to facilitate a fully intermodal smartcard for use on all forms of public transport. ITSO cards are used for the English, Scottish and Welsh concessionary card schemes, so there are already many millions of these cards in use.

The first National Rail franchise to introduce ITSO ticketing was the renewed South West Trains franchise in 2007. Since then all new National Rail franchises have included an obligation to introduce ITSO smart ticketing, although details vary from one franchise to another.

In addition to this work, the DfT has also funded an upgrade to Oyster card readers in London to accept ITSO smartcards - the ITSO On Prestige project. As with Oyster Pay As You Go, ATOC is co-ordinating train company input into this exercise and it is hoped that by the end of 2012, all TfL and National Rail Oyster readers will be able to accept ITSO based Travelcards along with Oyster and magnetic stripe tickets. It is expected that, given that 70% of all rail journeys begin or end in London, this will stimulate the more widespread use of ITSO smartcards on the rail network.

Work is underway to allow an ITSO card to be loaded to a mobile phone as an Application, and trials have taken place in the North West and London. Used on phones which have an NFC (Near Field Communications) capability, this enables the phone to act as an ITSO smartcard and remove the need for physical cards. However, NFC capability has to be designed into a mobile phone from the outset, and further developments will depend on how quickly such phones penetrate the market.

EMV

A quite separate ticketing development is the extension to transport use of contactless bank cards using the international EMV standard (Europay-Mastercard-Visa). Such contactless cards are increasingly being issued by banks in place of traditional Chip and PIN cards, and permit small value transactions to be carried out via a single touch to a validator, rather than needing the entry of a PIN. In transport terms, customers literally pay at the gate as they begin their journey.

Successful trials of such cards have been carried out by transport authorities across the world, and their introduction in London is being planned by TfL within the next year or so. It is hoped that their use will extend to train services in London.

ATOC is currently contributing to the international standards work which is seeking to extend EMV to handle the additional requirements of longer distance rail travel, for instance multi-leg journeys and tickets bought in advance that include seat and train reservation details.

Steve Howes
Steve.howes@atoc.org
October 2010