



Welcome!

Welcome to the first of what we hope will be a monthly ITSO SERVICES Newsletter. Please read on and if you have any comments or suggestions, we would welcome receiving those through an email to info@itsoservices.org.uk

News from ITSO Services Limited

- The ITSO Services Ltd (ISL) website is up and running. Please go to www.itsoservices.org.uk
- ISAMs (ITSO Secure Application Modules) have now been created and issued to bureaus and some suppliers have started card production
- The ISL HOPS (Host Operator or Processing System) is up and running and waiting for what we anticipate will be:
 - 5 million cards
 - 30 million messages in total or
 - around 360,000 messages per day
- ISL has now integrated four card bureaus with the remaining two to complete in the middle of February

Who is Helen Mitchell



Helen Mitchell joined ITSO in October 2007, after six years of being project Manager for the Cheshire County Council Smartcard Scheme.

Helen has taken on both roles as Head of Business Development for ITSO Limited and Head of Operations and Delivery for ITSO Services Limited. The initial focus within ISL has been on integrating card bureau suppliers with the ISL HOPS / AMS (Asset Management System), and the provision of ISAMs to these bureaus and individual Travel Concession Authorities, in order to produce cards in time for the launch at the beginning of April 2008. ISL will provide direct support to some 253 TCAs (78 schemes) through a dedicated team which is currently being recruited - more on the new team members in the next edition.

English National Concessionary Travel Scheme opens up some new areas to many TCAs, both technical and commercial, so we have deliberately set up two sources of information:

1. To contact ISL please email info@itsoservices.org.uk
2. The ART of SMART CD, containing the [THE SMART WAY: An introductory guide for English Travel Concession Authorities in the use of smartcards](#) (sponsored by Metro, the West Yorkshire Passenger Transport Executive) - If you didn't make the conferences last year, you can still catch the CD available from ISL or download the Guide from www.itsoservices.org.uk

Where are you now?

The Department for Transport has issued regular Bulletins over the last year to tell you what you need to do to be able to issue passes. There are a number of actions which should be either in place or pretty close to completion. Drawing on this, below is a check list so you can judge your own progress:

- Your data files for your eligible pass holders should be clean and ready to use
- You should have contracted with a bureau for the provision of your passes or.....
- If you are going to produce and issue the bulk passes from your own office then you need to tell ISL about this for two reasons:
 - You will need certain encoding information which you will have to provide to your software provider so that passes can be produced correctly.
 - The (ITSO Certified) kit you are installing will have to talk to the ITSO Services HOPS and arrangements will have to be made to test this interface.
- If you are going to produce ongoing passes (post bulk issue) from your own office, the above comment applies here as well

- If completing any pass production in your own offices you must ask ISL for your ISSN numbers (ITSO Shell Serial Numbers) and arrange for creation and delivery of your ISAMs
- After the bulk issue, if you intend to change to an alternative supplier, you must arrange with ISL for creation and delivery of new ISAMs
- Whichever of the above options you have chosen you should ensure that your supplier has ITSO certification to level 2.1.1 (or higher). If you have any doubts, please contact ISL by email and they will confirm supplier certification status
- As a part of the above process, you should have confirmed your OID (Operator Identification Number) and CPICC (Concessionary Pass Issuing Cost Centre) numbers to your card or equipment supplier
- You should have informed both your supplier and ISL of any additional enhancements or companion passes that you may wish to encode. ISL can help you decide how this is best done
- [Concessionary Bus Travel Bulletin #10](#) from the DfT recommends that TCAs offering companion passes should encode the companion entitlement on the chips in the appropriate passes. In doing so, TCAs should ensure that they are fully aware of any additional supplier or ITSO associated registration.

ISAMs

First some background...

The ISAM (ITSO Secure Application Module), which looks like the chip (SIM) in your phone, sits in a printer, ticket machine or back office processor and has three main purposes:

- to store the security keys needed by that device, which enables it to do such things as write to a card/pass
- to provide a secure digital signature on every item or product that is written to an ITSO smart media (card/pass)
- to secure data transactions by sealing them with a digital signature, both individually and by the "batch" .

Just as an aside – ITSO is what is known as a free-read specification. You do not need an ISAM to read the contents of a card as the read keys are not a part of the security system, but you do need to get keys to enable you to alter or write to the card. In this way, a simple device for customers to read their card would not need an ISAM.

Whenever something happens to a card, transactions are generated and "signed" by an ISAM (which can also store transactions ready to be forwarded later). These transactions are sent back to the card issuer and the product (ticket or concession) owner. These "players" are recognised by their OID (Operator ID). In the case of ENCTS the card issuer is normally the same TCA as the concession owner. In the future there may be, say, a Virgin ticket added to a concession card and in this case, both the TCA and Virgin need to know about the transaction.

Transactions are sent back when a back office talks to the ISAM (via the Point of Service Terminal or POST).

So do you need ISAMs?

The answer is **always** "YES" but the physical process of obtaining and keeping them depends on what arrangements you are adopting:

- If you have arranged to have your passes created and personalised by Fujitsu under the framework agreement then Fujitsu will liaise with ITSO Services Ltd and obtain the correctly formatted ISAMs. They will also send the transactions back to ISL who are responsible for looking after them until a TCA migrates to fully smart.
- If you are arranging with another supplier to provide this service, this "other" supplier should have informed ISL about the arrangement and in doing so will have asked ISL to profile ISAMs on your behalf. You might want to close the loop and ask your supplier if they have received the notification. If your supplier hasn't done this, there will be a delay in your pass production and issuing.
- If you are buying ITSO compliant equipment from a supplier to produce the passes in-house then you will need to obtain ISAMs directly from ISL for your use. It is suggested that you request two for each machine to act as a spare or to give some flexibility. If one gets full for any reason and the connection to the back office is down, the spare can be utilised to keep pass issuing going. To obtain these ISAMs contact ISL directly.

The ISAM is a crucial part of the security environment for ITSO and, in essence, in allowing the creation of a card it creates an identity. In a later issue we hope to look at the security implications of this.



Mifare 4K cards: A couple of comments

- How TCAs use the space on a Mifare 4K card is their decision but a number of experts from the Department for Transport, LASSEO (Local Authority Smartcards Standards e-Organisation) and ITSO have put their heads together and would strongly recommend that you adopt what is now referred to as FORMAT E (amended) and ensure that your supplier uses sector keys that they can provide you with. There is more information in the [Bulletin #9](#). For more background reading go to:
 - ⇒ http://www.itsoservices.org.uk/content/ITSO_SERVICES_LTD/NSCP_Mifare4k_Spec_V2.pdf
 - ⇒ http://www.itsoservices.org.uk/content/ITSO_SERVICES_LTD/Guidance_Notice_from_LASSEO_and_SCNF.pdf
 - ⇒ http://www.itsoservices.org.uk/content/ITSO_SERVICES_LTD/Laseeo_ITSOmemory_map.pdf
- Recent press reports about a Mifare® card being hacked should not concern TCAs. The card in question did not use ITSO and that makes all the difference. For more background reading on this go to:
 - ⇒ http://www.dutchnews.nl/news/archives/2008/01/german_hackers_break_transport.php or
 - ⇒ http://www.itso.org.uk/content/Press_Office/20080111_ITSO_PR_Alleged_Mifare_Crypto_hack.pdf;
- A response from NXP may be found on this link:
 - ⇒ http://www.itsoservices.org.uk/content/ITSO_SERVICES_LTD/20080109_NXP_Statement_Mifare.pdf



16th - 18th June 2008
St Georges Hall, Liverpool

7th Moving On Conference

Merseytravel is proud to be hosting the next Moving On Conference in Liverpool, the European Capital of Culture 2008. This key annual conference, supported by ITSO, ITS and Smartex and the Department for Transport, is taking place in the magnificent surroundings of St George's Hall on 16-18th June 2008.

The Moving On Conference is one of the few events where those delivering transport services are able to join with local and national politicians and other key transport decision-makers to look at real problems and consider innovative solutions.

The 7th Moving On Conference opens with a welcome speech from Neil Scales, (Merseytravel) followed by Gwyneth Dunwoody (MP and chair of the Select Committee on Transport) as our opening keynote speaker.

Moving On 2008 programme also includes the first ever public PTE Debate. The heads of the Passenger Transport Executives will be asked to debate bluntly the real issues that prevent them delivering better, cleaner and more public transport. The sole proviso that "I haven't got the money" is no longer an allowable response.

Confirmed Speakers include:

- Neil Scales OBE, Director General & Chief Executive, Merseytravel
- Professor Eric Sampson CBE, Newcastle University
- Gwyneth Dunwoody MP for Crewe and Nantwich & Chair of the Select Committee on Transport
- Jim Barclay, Assistant Director, Merseytravel
- Dr Karen Booth, Northern Rail
- Neal Skelton, Head Of Professional Services, ITS(UK) Ltd
- Dave Finnegan, Community Links Access Officer, Merseytravel & member of the Disabled Transport Advisory Committee

For more information visit the conference website at: www.moving-on-conference.co.uk.

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SPONSORS:

Peter Stoddart, The Editor of the ITSO Services Newsletter, is sponsored by ITSO Services Ltd and Merseytravel.

ITSO Services Limited is a company specifically created to look after non-smart TCAs, fulfilling all the ITSO related functionality a TCA would normally have to do for themselves as a smart pass operator on TCAs' behalf.

Merseytravel is the operating name of the Merseyside Passenger Transport Authority and Executive. Merseytravel coordinates public transport and works in partnership with private bus and rail operators to provide public transport on Merseyside.

Graphics courtesy of **Metro** (The West Yorkshire Passenger Transport Executive).

You can contact
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or
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Requests for **technical information**, such as ISAMs and ISSN numbering, should be sent to helpdesk@itsoservices.org.uk

Alternatively
You can contact
the **Department for Transport
Concessionary Fares team** at
concessionaryfares@dft.gsi.gov.uk

or call
Ian McConnell 07841 947431
or **Nick Rawlings** 07841 947383

