



E-BORDERS

OVERVIEW FOR TECHNOLOGY SUPPLIERS



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Version control

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V0.1	07/05/08
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Introduction

Purpose of this document

This document gives a high-level overview of the e-Borders programme for suppliers of technology to air, sea and rail carriers. This includes information about:

- what data carriers need to provide;
- when the data needs to be provided;
- what steps carriers need to complete before providing the data; and
- how carriers can provide the data.

Document audience

This document is intended for organisations active in supplying technology to air, sea and rail carriers. This technology includes:

- Global Distribution Systems (GDS);
- Computer Reservation Systems (CRS);
- Departure Control Systems (DCS); and
- Ground Handling Agents (GHA).

What is e-Borders?

e-Borders is a key component of the UK Government's border transformation programme. It will deliver a modernised border control which is more effective, efficient and secure and meets the future operating needs of the border agencies

The main purpose of the e-Borders programme is to collect and analyse **passenger and crew data** provided by carriers, in respect of **all journeys to and from the United Kingdom** in advance of passenger travel

This will support an intelligence-led approach to operating border controls which will:

- identify persons of interest;
- export the border – preventing identified individuals from travelling to the UK; and
- expedite legitimate travellers – by providing the opportunity for technology systems to support the more efficient management of passengers through UK border control.

Our commercial partner Trusted Borders is a consortium of companies responsible for engaging with carriers to provide the required data and to build the e-Borders system that will analyse it. Provision of data by carriers is crucial to the overall success of the e-Borders programme.

What data do carriers need to provide?

Data is required from carriers for passengers and crew on United Kingdom inbound and United Kingdom outbound journeys. Generally speaking, the information required falls into three categories:

- Travel Document Information (TDI);
- Service Information (SI); and
- Other Passenger Information (OPI).

In the aviation industry, the terms Advance Passenger Information (API) and Passenger Name Record (PNR) are more commonly used for TDI and OPI respectively. The terms TDI and OPI have been adopted for the e-Borders programme as generic terms to be applied across the whole travel industry to include carriage by air, sea and rail.

The immediate mandatory requirement for e-Borders is that carriers provide TDI and SI data. OPI data will only be required from August 2009 at the earliest, at which point OPI data will only be required from carriers to the extent that they capture this data, and only on certain specified routes.

Travel Document Information (TDI)

Carriers will be required to collect and transmit all TDI data to the border agencies through e-Borders. TDI refers to a passenger's or crew's biographic and travel document details (eight pieces of data), normally contained in the machine-readable zone of a passport or other travel document.

Service Information (SI)

Service Information is information relating to the flight, train or ship the passenger or crew member is travelling on. This information must be provided by carriers in all cases for both inbound and outbound journeys.

Other Passenger Information (OPI)

OPI refers to information held by a carrier in connection with a passenger's booking or reservation. In the airline industry, this also includes data that may be held within an airline's Departure Control System (DCS) such as check-in time, seat number and baggage details. In practice, OPI data will be routinely requested from carrier reservation and departure control systems in respect of the aviation industry, and from comparable maritime or rail systems.

The extent to which OPI is gathered by carriers varies both between and within different transport sectors. However, it is important to emphasise that OPI data needs only be supplied by the carrier to the extent that it is known to it. Carriers will not be required to supply OPI data elements that they do not normally collect for their own commercial purposes.

When do carriers need to provide the data?

Discussions are ongoing on the timings for rail and maritime industries and details will be provided to those carriers and suppliers as part of the engagement process. This is essentially a framework and there is recognition that there may be exceptions that need to be negotiated. If a carrier wishes to provide data outside of the timeframes below, this will need to be agreed. These timings and any requested exceptions will be discussed as part of the engagement process. It is important to note that the border agencies reserve the right in exceptional circumstances to request data outside of the agreed timescales in response to operational need.

Aviation passenger data

In due course, the agencies intend to move towards a compulsory passenger-by-passenger method of data transfer. Carriers and suppliers should bear this in mind when making commercial decisions about system development. It is recognised that both individual and batch transmission are acceptable under current legislation but it would be preferred that carriers provide passenger data for each passenger.

The programme intends to request that carriers provide passenger data for each flight as described below:

A: Pre-departure – During the period from the flight opening (no more than 24 hours before the scheduled time of departure (STD)) until the flight closes (the time at which no more passengers can join the flight), carriers are obliged to transmit the TDI data they hold for each passenger. The data must be submitted early enough before departure so as not to compromise the operational objectives of the agencies. This will typically be no more than 30 minutes before the STD, although this will depend on the specific route and will be agreed on a route-by-route basis with the carrier concerned.

B. Post-departure – Carriers are obliged to transmit, as a single message, confirmation of all passengers travelling, within 30 minutes of the time at which the service actually leaves ('push back').

Aviation crew data

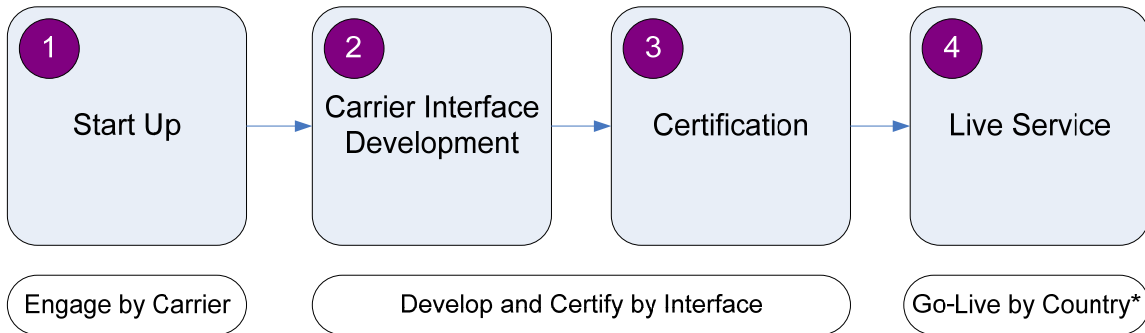
The programme intends to request that carriers provide data for crew members for each flight as described below:

A: Pre-departure – Carriers are obliged to transmit data for all crew operating a service, to the extent that it is known, between 48 hours and 1 hour before the scheduled time of departure, using individual TDI messages, batched TDI messages, or a combination of these. The carrier must submit all further crew changes before the point at which no further changes are possible and early enough before departure so as not to compromise operational objectives.

B: Post-departure – Carriers are obliged to transmit, as a single message, confirmation of all crew members travelling, within 30 minutes of the time at which the service actually leaves ('push back').

What steps do carriers need to complete to provide the data?

The carrier rollout is split into four phases:



*While we recognise that this is the carriers' preferred method, we are checking whether this will enable us to meet our ministerial commitments.

- The **start-up** phase is an initial period of engagement designed to provide carriers with the information they require to start their rollout activities. It will cover all routes operating into and out of the UK.
- The **carrier interface development** and **certification** phases will be completed by each carrier for each interface in parallel.
 - **Carrier interface development** involves the carrier building the required interfaces to transmit the data.
 - **Certification** involves the process of certifying the ability of each carrier interface to transmit the data.
- Carriers will then start **live service** (start to supply data) for those routes associated with the countries in line with the country-by-country rollout sequence.

How do carriers provide the data?

Introduction

In order to interface to the e-Borders system, a carrier will be required to select, build, test and certify a compatible interface or interfaces.

The carrier will be required to select and identify the protocol(s) and data format(s) it intends to use to supply the necessary data.

Protocols

The following protocols or transport mechanisms are available for connection to e-Borders:

- HTTP - Hypertext Transfer Protocol, for example file upload, web form entry or web services;
- SOAP;
- IBM MQ;
- FTP - File Transfer Protocol;
- Type B over IBM MQ; and
- Type B over MATIP – Mapping of Airline Traffic over Internet Protocol.*

*Only available from release 2 of the programme

Carriers may also choose to supply data to e-Borders through a third-party supplier. In these circumstances it will be the responsibility of the carrier to ensure that the third party uses one of the protocols outlined above. In addition, carriers are responsible for ensuring that the data conforms to one of the supported data formats as summarised below.

Data formats

Data formats available for transmission of carrier data to e-Borders are as follows:

UN/EDIFACT PAXLIST

Used within the aviation industry to report passenger or crew manifests. This is a system-to-system interface based on a well defined hierarchical data stream made up of individual data elements within data blocks. For example, passenger birth date is passed in a well-defined data segment as follows:

DTM+329:570121

where:

- DTM is the date-time PAXLIST data segment identifier;
- 329 indicates the segment is being used to report a birth date; and
- the date-time is 21 January 1957.

XML (e-Borders)

This is a special format designed for e-Borders that provides data structures to capture all the data elements needed. The e-Borders XML file can be used to report passenger and/or crew data, along with the accompanying service information.

XML (OTA)

OTA (Open Travel Alliance) XML is an industry standard in which one message usually represents the data collected when a single or small group of passengers check in. It is commonly used in self-service check-in kiosks and passenger swipe card application.

XML (IATA)

This is an industry standard XML format being designed for use in the airline industry.

Excel file format

Carriers can download an Excel template and put in the required data. The Excel file can then be uploaded to the e-Borders system.

Comma Separated Values (CSV) file format

Much the same as using the Excel file, including the same data fields, and will be uploaded to the e-Borders system.

Web forms

Expected use is mainly by general aviation or maritime, private aircraft or boat owners. To be used for both web-based data input and submission as well as for the upload of data files. Carriers can log into a website from a supported browser, and it is suitable where a system-to-system interface is not available.

e-NOA/D (Electronic Notice of Arrival or Departure)

Standard developed by United States Coast Guard (USCG) for use with maritime traffic. Used by maritime vessels to supply arrival and departure data to the US Government.

UNICORN

UNICORN was conceived by the European ferry industry as a mechanism to exchange information on services, passengers and revenue. It is analogous to the EDI interfaces sponsored by IATA. Although so far based around use by the maritime industry, there are messages exchanged within UNICORN that may be used in the e-Borders application by any carrier.