

INTRODUCTION

This document provides an overview of the APIS collection procedure and how to connect an RTE6701 passport reader to a carrier's computer system.

The purpose of gathering APIS data is to send a manifest list to Washington to enable CBP and TSA to pre-clear passengers. This is achieved electronically using UN-EDIFACT via email, Type B messaging or e-APIS. There are three methods for collating the passport data and producing the manifest:

1. Using the carrier's DCS or LDCS
2. Using a laptop PC operated by the carrier
3. Using a profiling company's laptop system

Using a laptop means a simple self-contained system but this is more suited to collecting data at the gate where there are less stations required – once you have more than one PC you need some way of combining the data, such as RT-APIS.

Most people collect the APIS data during check-in and use their DCS to assemble the data, create the list and send it to CBP.

Most DCSs now have an APIS module of some description. If your DCS does not have an APIS module you will have to talk to your DCS provider about writing one or investigate a standalone solution such as RT-APIS. Alternatively talk to your passenger profiling company.

COLLECTION OF APIS DATA USING YOUR DCS

Having decided to collect the data using your DCS the next step is to transfer the data from the passport reader to the DCS. How you do this depends on the terminal (VDU) hardware, existing DCS software and the support the DCS / CUTE environment provides for peripheral devices.

Before going any further we need to define a few terms. In a CUTE environment the carrier usually owns the Terminal Emulator (TE) software. This software runs on the check-in desk PC (or IWS – intelligent workstation) and connects the peripherals (keyboard, screen, mouse, BTP, ATB, etc.) to the DCS.

In effect it is a converter that speaks DCS at one end and CUTE at the other end. In a dedicated system that uses a dumb terminal the terminal only talks DCS and often can't be programmed. A dedicated PC has more flexibility and usually has some kind of TE software.



The RTE6701 passport reader from US Customs can be connected to your DCS in the following ways:

1. Via an RS232 or USB serial port to your Terminal Emulator (TE) running on a CUTE or dedicated system.
2. Connected through a PS/2 or USB keyboard of either the dumb terminal or PC located at the check-in desk. This uses an interface called a hardware keyboard wedge.
3. Use a serial (RS232 or USB) reader with a software keyboard wedge. This is software that takes serial data and emulates keystrokes.

With a hardware or software keyboard wedge the passport data is edited and then embedded into a DCS command which appears on the VDU screen just as if the agent had typed it.

Which of these methods you use largely depends on the commercial and technical requirements of your IT department, as well as the infrastructure at the airports you serve.

The main differences to consider between serial and keyboard wedge are:

Hardware keyboard wedge	Software keyboard wedge	Direct serial port
Can connect to almost all existing terminals.	Generally requires a PC with a spare serial or USB port.	Generally requires a PC with a spare serial or USB port. The CUTE TE or dedicated DCS has to support serial devices.
Requires no changes to the user interface if the DCS already has an APIS module.	Requires no changes to the user interface if the DCS already has an APIS module.	DCS or TE usually requires modifying.
Slower data transfer.	Faster transfer of data.	Faster transfer of data.
Data is sent from the reader to mimic agent's keystrokes, including commands and screen movements.	Data is sent from the reader to mimic agent's keystrokes, including commands and screen movements.	All passport data is sent to the TE, helping to future-proof the system design.
System changes and new DCS commands require the OCR/MSR reader control program to be updated.	System changes (e.g. a new field needs to be extracted) require only the PC software to change.	System changes (e.g. a new field needs to be extracted) require only the TE to change.

The keyboard wedge is really only used when you have a DCS with an APIS module that does not support a serial port connection or where it is not feasible to modify the terminal emulator to support the passport reader.

USING THE HARDWARE KEYBOARD WEDGE

The RTE6701 can be supplied with an internal keyboard wedge providing connectivity with PC/AT, PS/2 or USB style keyboards. Because the output of the wedge has to emulate the agent's keystrokes the RTE6701 passport reader must extract the relevant APIS data from the passport and package it up as a DCS command before sending it via the wedge to the terminal or PC. This is usually achieved by RT writing a special control program for the RTE6701 passport reader thus tying the reader to the DCS. The Sabre, SHARES and SITA DCSs already have a keyboard wedge program available.

A full range of dumb terminals, including Telex, DEC, Westinghouse, Videcom, Memorex and Ferranti may also be supported either within the RTE6701 or via an external wedge.

If you are using a PC then it is preferable to use a serial connection as this reduces longer term support costs as all data is sent by the reader and more freedom can be provided for the timing of the passport read within the check-in sequence.

USING THE SERIAL PORT INTERFACE

The RTE6701 has been certified for use on the following CUTE systems using serial port protocols:

- SITA AirportConnect CUTE (CUTE/XP)
- ARINC MUSE and iMUSE
- RESA CREWS
- Videcom CUS

There are also many other serial port protocols – a simple and standard one being the US Government's TECS interface. Some of these protocols allow a high degree of control over the working of the RTE6701 whilst the others generally 'blind transmit' the data – requiring the computer to be ready to receive the data at any time.

You should not assume that because you have a CUTE environment and that your DCS has an APIS module that you can connect a passport reader via a serial port. You may still have to modify your TE to provide the connection between the serial port (that the reader is connected to) and the DCS. Also check that the DCS can support virtual COM ports provided by serial USB converters.

Whilst at first sight connecting a passport reader to your DCS may require a lot of consideration answering a few simple questions about your DCS and check-in desk computers will enable you to determine what type of connection is required and whether any software needs to be written.

REQUIRED APIS DATA

The following passenger data is to be provided by the carrier. Starred elements (*) can be captured automatically using the RTE6701 passport reader.

*	Full name
*	Date of birth
*	Gender
*	Citizenship
*	Country of Residence
	Status on Board Aircraft
*	Document Type
*	Passport or Document Number
*	Passport Country of Issuance
*	Passport Expiration Date
*	Alien Registration Number
	Address in the USA including Zip code
	PNR Locator
	Airport Codes for Start of Travel, Port of Arrival and Final Destination.

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Decision Flowchart for determining best interface and protocol

