

Traveler Verification Service (Cloud-Based Matching Pilot)

Technical Reference Guide



U.S. Customs and
Border Protection

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Change Control Log

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1. Introduction

1.1 Purpose

The purpose of this document is to provide the interface specifications between the U.S. Customs and Border Protection (CBP) Traveler Verification Service (TVS) and Commercial Airline/Cruise line Operators supporting the Biometric Air Exit and Sea Entry pilot. CBP Office of Information and Technology (OIT) will work closely with each airline/cruise line in developing, testing, and implementing software during the pilot phase.

1.2 Background

TVS is the next transitional step towards deployment of reliable and repeatable biometric verification capabilities in the air exit/entry and sea exit/entry environment. TVS is intended to operationalize its recent predecessor, Atlanta Pilot. The Departure Information Systems Test began on June 15, 2016 at the Atlanta Hartsfield-Jackson International Airport, in cooperation with Delta Airlines, a major U.S. carrier. A CBP manned camera and tablet computer were placed between Delta's boarding pass scanner and the aircraft. As travelers checked in for their flight, all previously provided or captured photographs were assembled into a downloadable file that was pushed to the tablet prior to boarding. As travelers passed through the boarding area, they stopped at the camera while a photograph was captured. The live photographs were compared to the downloaded gallery of expected travelers to determine if CBP systems could accurately match live photographs to those of the same traveler that were previously acquired by CBP.

The objective of TVS is to further the pilot to experiment and establish a Reference Implementation model where the airline or cruise line provides the traveler biometric and biographic data to CBP for biometric verification of the traveler.

2. Internet Connectivity

2.1 Networking

2.1.1 Network connection requirements

TVS will be publicly available through the internet. TVS will not require calling systems to connect to the CBP, DHS, or other U.S. government network.

2.1.2 (b)(7)(E)

(b)(7)(E)

2.1.3 (b)(7)(E)

(b)(7)(E)

2.1.4 (b)(7)(E)

(b)(7)(E)

2.2 Testing Region

2.2.1 (b)(7)(E)

TVS has a test region for technical certification. Technical specifications for this connection are outlined in this document.

2.2.2 URL

Use the following URL for the test region:

(b)(7)(E)

2.2.3 Project Test Plan

Airlines and Cruise lines should coordinate with CBP at the following points:

1. Prior to development
 - a. Establish a schedule for development, testing, production deployment, and operations date range
 - b. Provide airport, gates, flights
 - c. Provide high-level solution details
 - d. Verify internet connectivity to TVS
 - e. Provision security credentials to access the TVS test region
2. During development
 - a. Resolve technical issues
 - b. Address technical questions
 - i. Networking test (b)(7)(E)
3. Prior to integration testing
 - a. Create test data
 - i. Photos
 - ii. Ticket numbers (i.e., UIDs)

2.2.4 TVS in a Box

TVS also has a virtual instance of the service which can be used for development, education, and/or testing. The URL for the virtual instance will be made available in the near future. Technical specifications for this connection are outlined in the TVS in a Box Guide document.

3. Interface Overview

CBP provides a TVS Web Service for the airlines/cruise lines to use for submission of photos of the travelers (b)(7)(E)

(b)(7)(E)

3.1

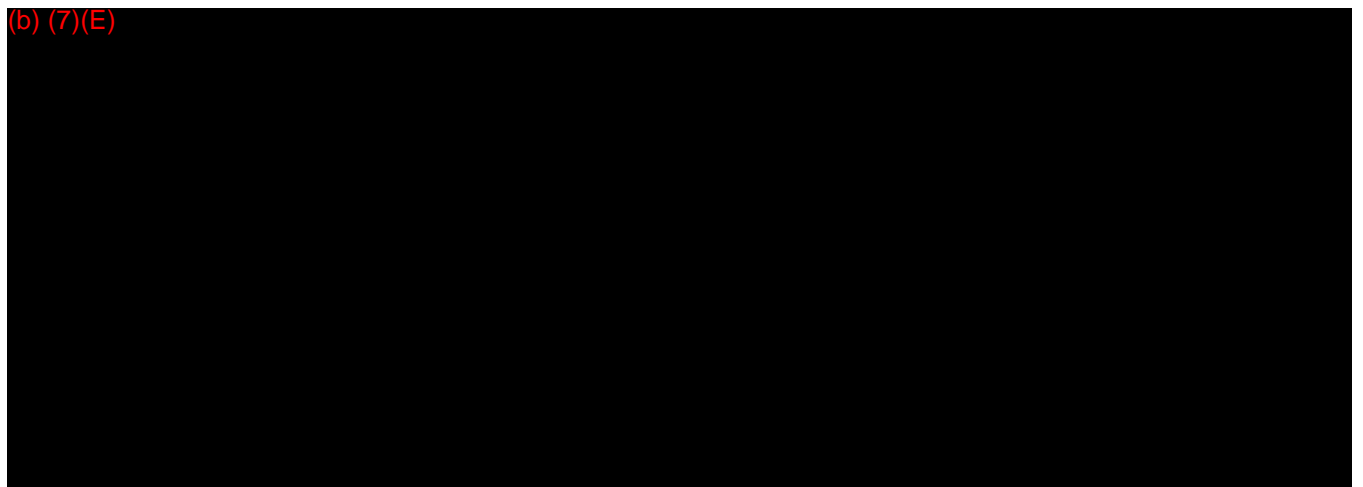
(b) (7)(E)

(b) (7)(E)

(b) (7)(E)




(b) (7)(E)



3.1.2 Login Request Message Elements

A query message shall include the following data elements for **Login**:

(b) (7)(E)



3.1.3 Login Response Message Elements

(b) (7)(E)



(b) (7)(E)



3.1.4 Authorization Header

After a successful login, the response will contain an (b) (7)(E)

Please note the following:

(b) (7)(E)



3.1.5 Refresh Token (b)(7)(E)

(b) (7)(E)



3.1.6 Refresh Token Request Message Elements

A query message shall include the following data elements for **Refresh Token**:


(b) (7)(E)



3.1.7 Refresh Token Response Message Elements

A response message shall include the following data elements for **Refresh Token**:

(b) (7)(E)



3.1.8 Change Password (b)(7)(E)

The changePassword (b)(7)(E) allows an authenticated user to update their existing password to a new password.

(b) (7)(E)



3.1.9 Change Password Request Message Elements

A query message shall include the following data elements for **Change Password**:

(b) (7)(E)



3.1.10 Change Password Response Message Elements

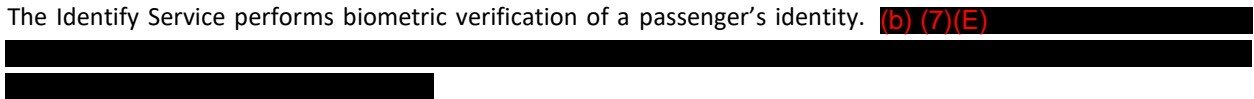
A response message shall include the following data elements for **Change Password**:

(b) (7)(E)



3.2 Identify Service

The Identify Service performs biometric verification of a passenger's identity. (b) (7)(E)



(b) (7)(E)



(b)(7)(E)



(b) (7)(E)



3.2.2 Encounter Types

(b) (7)(E)



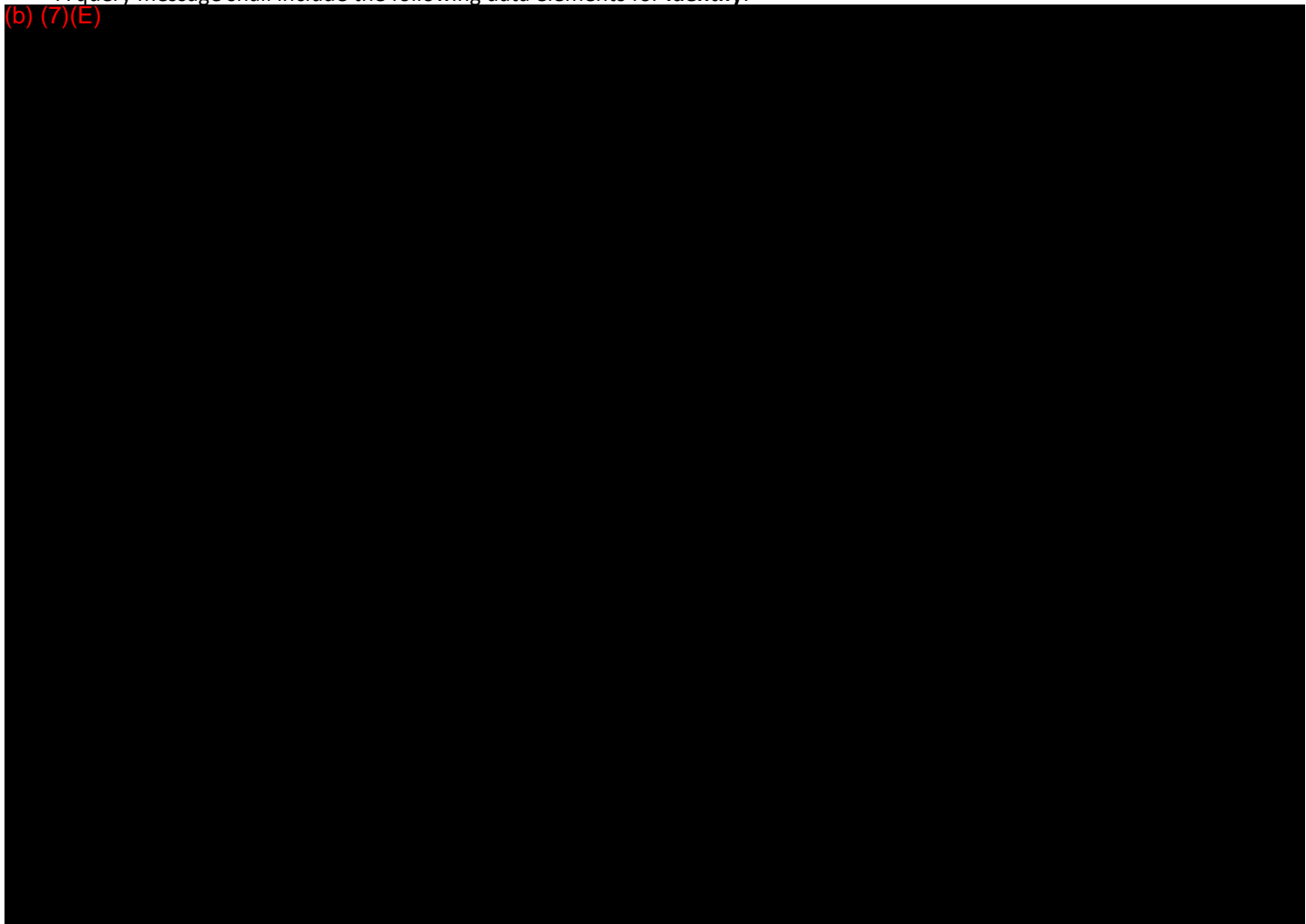
(b) (7)(E)

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3.2.3 Identify Request Message Elements

A query message shall include the following data elements for **Identify**:


(b) (7)(E)

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3.2.4 Identify Response Message Elements

A response message shall include the photo match result and the correlation ID for **Identify**.

(b) (7)(E)

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(b) (7)(E)

3.3 User Authentication

For the pilot phase, CBP will register and grant access to users to the (b) (7)(E). Contact the POC listed in Section 6 below. Upon registration, the (b) (7)(E) URL for the services will be provided.

4. Photo Specifications

(b) (7)(E)

5. Assumptions

- Airlines will capture and submit photos of internationally departing travelers.
- Cruise lines will capture and submit photos of inbound debarking travelers.
- Photos must meet specifications described in Section 4.

6. Request Log-in ID

To request a log-in ID, please submit a request to: (b)(6)&(b)(7)(C)

Include in the email:

- Airline/Cruise Line Name
- Port Name
- Device Description
- POC with email

7. URL

Use the following URL:

(b) (7)(E)

8. Contact Information

Send questions and comments related to this reference guide to

(b)(7)(E)

9. Acronyms

ANSI	American National Standards Institute
(b)(7)(E)	

APIS	Advance Passenger Information System
CBP	Customs and Border Protection
FOUO	For Official Use Only
IATA	International Air Transport Association
NIST	National Institute of Standards and Technology
OIT	Office of Information and Technology
PX	Pixel
TVS	Traveler Verification System
UTC	Coordinated Universal Time
WS	Web Service

10. Appendix

10.1 Network Testing Examples

10.1.1 (b)(7)(E) Sample Response Screenshot



Figure 3: Sample (b)(7)(E) Test Response

10.1.2 (b)(7)(E) Sample Complete Response



(b) (7)(E)

