1-to-1 Facial Comparison Project Quick Reference Card

Facial Comparison is Mandatory for all USCs and First-Time ESTA (VWP) Travelers processed in lanes equipped with 1-to-1 Facial Comparison System

PRIMARY

Aug 2017—V1.0 R1.5

Step 1: Officer (b) (7)(E) Sign In/Sign Out:

- (b) (7)(E)

(b) (7)(E)

.

- (b) (7)(E)
- (b) (7)(E)
- (b) (7)(E)

(b) (7)(E)

(b) (7)(E)

(b) (7)(E)

(b) (7)(E)

(b) (7)(E)

Step 2: Scan ePassport:

- (b) (7)(E)
- (b) (7)(E)
  - (b) (7)(E)
  - (b) (7)(E)
  - (b) (7)(E)
  - (b) (7)(E)
  - (b) (7)(E)
- (b) (7)(E)
- (b) (7)(E)

(b) (7)(E)

Step 3: Take (b) (7)(E) Photo:

- Ask traveler to face (b) (7)(E) camera and stand on floor footprints (if available at site).
- Press **Take Photo** button (b) (7)(E)
- Direct traveler to remain at camera until told to proceed.
- Results of ePassport scan and (b) (7)(E) photo will display with a (b) (7)(E) .

(b)(7)(E)

Step 4: Review (b) (7)(E) Results and Retake Photo, if Necessary:

(b) (7)(E)

- (b) (7)(E)
- (b) (7)(E)
- (b) (7)(E)

- (b) (7)(E)
  - (b) (7)(E)
- (b) (7)(E)

(b) (7)(E)

(b) (7)(E)

.

(b) (7)(E)

Step 5:

Press **Done** if photos match. Continue Primary inspection.

OR

For Secondary Referral, (b) (7)(E)

- (b) (7)(E)
- (b) (7)(E)
  - (b) (7)(E)
  - (b) (7)(E)

(b) (7)(E)

1-to-1 Facial Comparison Project Quick Reference Card

Facial Comparison is Mandatory for all USCs and First-Time ESTA (VWP) Travelers processed in lanes equipped with 1-to-1 Facial Comparison System

PRIMARY

Aug 2017—V1.0 R1.5

PRIMARY LANES

(b) (7)(E)

(b) (7)(E)

TROUBLESHOOTING RECOMMENDATIONS

(b) (7)(E)

Training Outline

Slide	Topic	Notes
1	**Introduction**	
2	**Learning Objectives**	
3	**Field Transformation: How Will Technology Change My Role?** • Primary is **the most important job** in CBP. Officers working Primary are the **first line of defense** for the safety and security of the United States. • Threat awareness is key in knowing what to look for as you **determine traveler purpose and intent**, a process that will be supplemented, not replaced, by technology. • ***Technology will never replace the human skills needed to find threats to our nation.*** • [redacted] (b) (7)(E) • Technology will help enable us to remain **one step ahead of the known and unknown threats**.	
4	**Targeting Results** • [redacted] (b)(6) (b)(7)(C) (b)(7)(E) •	
5	**How Did We Get Here?** • **1996 Illegal Immigration & Immigrant Responsibility Act** – Congress directs the implementation of a Biographic Entry & Exit System • **2002 Border Security Act** – requires all ports of entry to have equipment that allows biometric comparison and travel document authentication. • **2004** – U.S. Visit begins to collect a photograph and fingerprints of foreign travelers. • **2013** – Congress transfers the Biometric Exit mission to CBP. • **2017 Executive Order (E.O.) 13780** – calls for the expedited completion of the Biometric Entry-Exit Tracking System.	

6	**Strength of Facial Comparison Technology**	
	• CBP is using **already existing traveler biometric (facial) and biographic information** including visa photos, Primary encounters, certain enforcement data, US Passports, and LPR card photos. • Facial comparison **eliminates the need to take fingerprints** each time a foreign national returns to the United States, only requiring on first encounters and expired prints. (b) (7)(E) • (b) (7)(E) • Facial comparison technology is very accurate and has **drastically increased CBP's ability to detect imposters** when compared to human detection. • The use of facial comparison technology has led to **positive tangible results**. To date, 250+ imposters have been caught at the land border.	
7	**Understanding the Process**	

	• (b)(7)(E) vetting occurs constantly
	• Current Process
	  o APIS Transmission
	  o TVS Builds Gallery
	  o Travelers Queue
	  o Take Photo and Match
	  o Determine Purpose and Intent
	• Traveler Verification Service (TVS)
	  o The Traveler Verification Service (TVS) is the backend system that performs the facial comparison function.
	• TVS Process
	  o Gallery Creation
	  ▪ Using flight manifest data collected from APIS, TVS builds a port-specific gallery of traveler images collected from passports, visas, and other DHS encounters.
	  o Using Cloud
	  ▪ The biometric templates of the collected images are stored in an encrypted Virtual Private Cloud (VPC).	

7 cont.

- Take Photo
  - After the traveler photo is taken, it is compared to the gallery of collected templates.
- Match Response
  - A "match" or "no-match" is returned and the officer can continue with the entry process. The system also presents visa and passport information, and vetting results.
  - **1:n Matching** occurs when the live photo will be matched against a gallery of photos.
  - **1:1 Matching** occurs when a 1:n match fails. The live photo will be matched to the document photo.

8

Conducting the Inspection

	Can I Photograph in Primary?	Notes
In-Scope Non-USC	Always	Photos are stored in (b)(7)(E) for 75 years for future identity verification.
Out-of-Scope Non-USC	Can Opt Out	This group includes travelers under the age of 14 and over the age of 79, diplomats, Canadians, and otherwise exempt aliens. Photos are deleted within 14 days.
USC	Can Opt Out	Photos of U.S. Citizens are deleted immediately from the system upon matching. U.S. Citizens can opt out if requested. If the camera has automatically captured a photo, you must delete it.

9

Simplified Arrival Policy

	0-5 Years Old	6-13 Years Old	14+ Years Old
1:n	**No Match –** (b) (7)(E) [redacted]	**No Match –** (b) (7)(E) [redacted]	**No Match –** (b) (7)(E) [redacted]

	1:1	**Mismatch –** (b) (7)(E) [redacted]	**Mismatch -** [redacted]	**Mismatch -** [redacted]	
10	**All Biometrics Have Vulnerabilities**				
	• (b) (7)(E) ○ (b) (7)(E) [redacted] • (b) (7)(E) [redacted] • (b) (7)(E) [redacted] • (b) (7)(E) [redacted]				
11	**Checking Against the Watchlist**				

	• Current: Fingerprinting
	  ○ **Pre-arrival:** APIS transmits biographic information, which is automatically queried against (b)(7)(E) to locate any (b) (7)(E) and Fingerprint Identification Numbers (FIN) associated with the **document number**.
	  ▪ *First-time traveler* - If no FIN is found, the officer is prompted to take a 10-print which is enrolled in (b)(7)(E)
	  ▪ *Returning traveler* - FIN is queried through (b)(7)(E) The FIN, existing 10-print, document number, and record are tied to the traveler. Upon arrival, the document scan and 4-print biometrically validate the traveler's identity and ties the information together.
	• Future: Facial Comparison
	  ○ **Pre-arrival:** APIS transmits biographic information, which is automatically queried against (b)(7)(E) to locate (b) (7)(E) (b) (7)(E) and FINs associated with the **biographic information**.
	  ▪ *First-time traveler* - if no FIN is found, officer is prompted to take a 10-print which is then enrolled in (b)(7)(E).
	  ▪ *Returning traveler* - upon arrival, the facial comparison biometrically validates the traveler's identity, ties the information together, and queries				

	the FIN through (b)(7)(E) The FIN, existing 10-print, document number, and record are tied to the traveler.	
12	**Impostor at San Diego Airport (SAN)**	
	• (b) (7)(E), (b) (6), (b) (7)(C) [redacted] • (b) (7)(E), (b) (6), (b) (7)(C) [redacted]	
13	**Imposter at Washington Dulles International Airport (IAD)**	
	• On September 8, 2018, a female subject presented a valid U.S. passport as a returning United States citizen. • The subject's true country of citizenship was Ghana. (b) (7)(E) [redacted]	
14	**Impostor example: Border Crossing Card**	
	• On October 31, 2018, a female subject and her daughter presented B1/B2 BCCs. (b) (7)(E) [redacted]	
15	**Handling a 1:1 Mismatch**	

	• 13 Years & Younger:
	  ○ (b) (7)(E) [redacted]
	• 14 Years & Older:
	  ○ (b) (7)(E) [redacted]
	• Best Practices:
	  ○ Ask travelers for additional forms of identification during Secondary processing to facilitate identity confirmation.
	  ○ (b)(7)(E) [redacted]
	  ○
	  ○	

Training Outline

	○ (b)(7)(E) ○	

Application Screenshots - Notes

Training Outline

Training Outline

Additional Resources

- Report a problem
  - If you need to report a problem while using Simplified Arrival Air, select **Report a Problem (with screenshot)** from the Application menu.
- Help
  - Select **Help** from the Application menu or press [redacted] on any screen in Simplified Arrival Air

Training Outline

- Resource Materials include an Interactive Tutorial, User Guide, and Presentation.
  - (b)(7)(E)
- To submit any questions or concerns visit:
  - (b)(7)(E)

#	Metric ID	Metric Description	Unit of Measure	Performance Measurement Category Mapping	2019 Target	Measurement Condition	Reporting Frequency	Is the Metric Retired?
1	105108	Maintain Availability (Uptime) for Traveler Verification Service (Total Time in Period – Downtime)/(Total Time in Period)	Percentage	Customer Satisfaction (Results)	99	Over target	Monthly	No
2	105107	Maintain Time for TVS Completion of Photo Match in Cloud to Less Than 2 seconds on average at Air Exit (Average of time for all matches completed by flight)	Seconds	Customer Satisfaction (Results)	2	Under target	Semi-Annual	No
3	105105	Increase Total Number of Travelers Processed by Biometric Technology at Air Exit (Total Count of Match + No Match Results)	People	Strategic and Business Results	500,000.00	Over target	Monthly	No
4	105106	Maintain Biometric Technical Match Rate at Air Exit (Matched In-Scope Travelers/(In-Scope Travelers With Photo Plus Usable Photo Captured at Air Exit))	Percentage	Strategic and Business Results	96	Over target	Annual	No
5	105109	Maintain Percent of In-Scope Travelers With No Photo for Available for Gallery Building (Excludes Countries that CBP Does Not Retain Photos) (1 - (In-Scope Travelers with Photo in Gallery / Number of In-Scope Travelers)	Percentage	Strategic and Business Results	5	Under target	Annual	No

Metric ID	Actual Result	Date of Actual Result
105105	1,920,575.00	19-Feb-19
105105	2,401,795.00	2-Apr-19
105105	2,775,028.00	30-Apr-19
105105	3,211,045.00	28-May-19
105105	3,533,778.00	18-Jun-19
105107	0.254	21-Jul-19
105105	4,507,828.00	30-Jul-19
105108	99.85	26-Aug-19
105105	5,309,456.00	3-Sep-19
105105	5,886,489.00	24-Sep-19
105106	98.2	24-Sep-19

PARE 2.0 (b) (7)(E)

11/6/2018

DESCRIPTION

PARE 2.0 team members (b)(7)(E) (b) (7)(C), (b) (4) were participating in a (b) (7)(E) collected from Peace Bridge site on 11/5/2018 with images on file (b)(7)(E) (b)(7)(E). This exercise concentrated solely on the (b) (7)(E). (b) (7)(E) was observed during this ground truthing exercise.

RESULTS

After a thorough analysis of photos by all participants (b)(7)(E)

(b)(7)(E)

(b) (7)(C), (b) (4) was able to identify several venues for image quality improvement to incorporate into the upcoming camera deployment (b)(7)(E):

(b)(7)(E)

The following agreements were made (b)(7)(E) to effectively collaborate during this development effort:

- (b)(7)(E)
- (b)(7)(E)
- (b) (5), (b) (7)(E), (b)(7)(E) team will conduct another round of ground truthing and evaluate matching thresholds and parameters for further provisioning (b) (7)(E). This will most likely take place (b) (7)(E).

Pre-Arrival Readiness Evaluation (PARE)

FACE RECOGNITION & IMAGE ANALYSIS

(b) (7)(C), (b) (4)

Sunday May 12, 2019 – Sunday May 26, 2019

Version 1.0

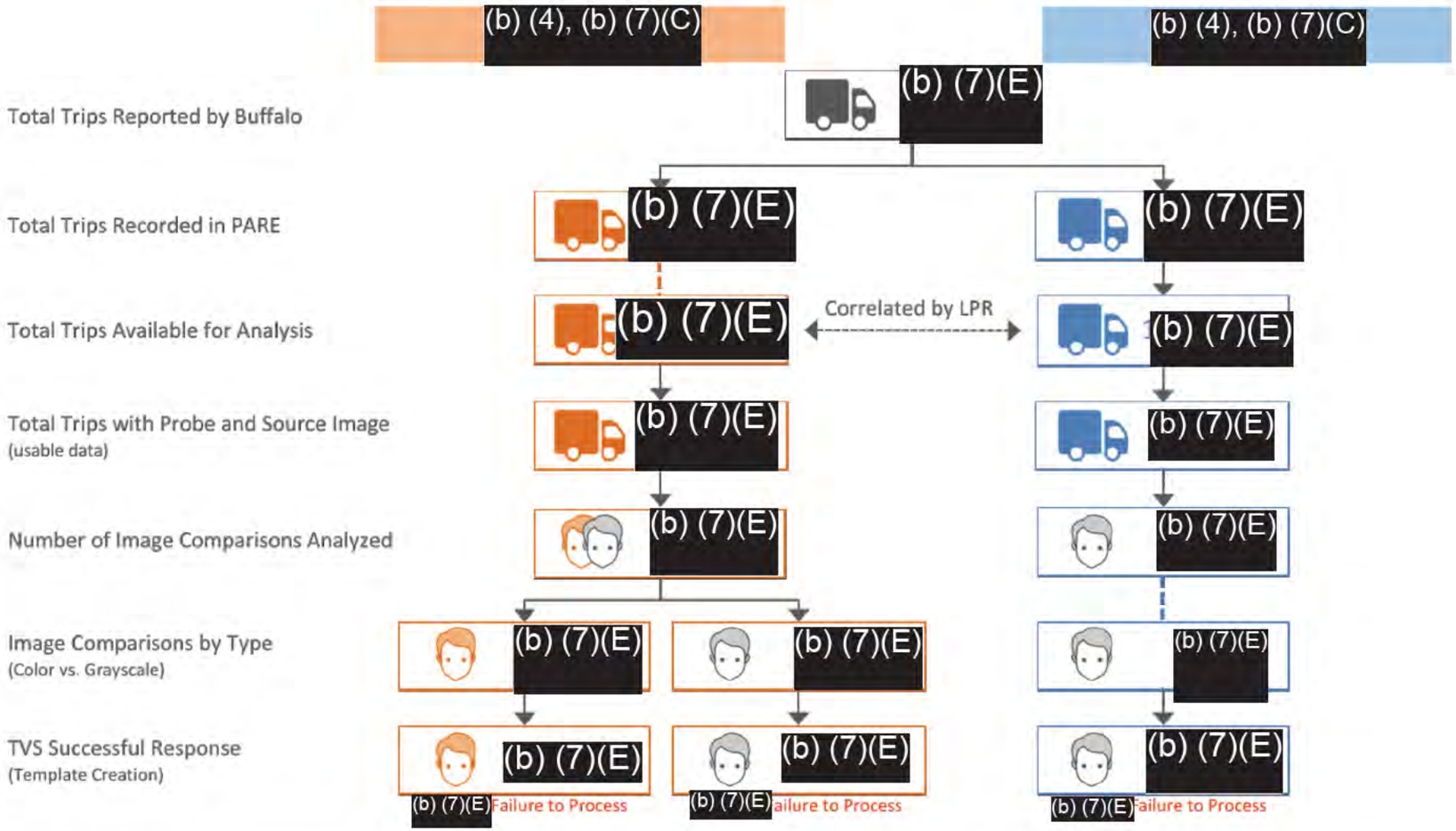
HIGH-LEVEL FINDINGS

- Total number of unique trips considered from 12May2019 – 26May2019 to conduct this analysis were [redacted] for [redacted] and [redacted] for [redacted]
- Capture Rate for [redacted] images was [redacted]% vs [redacted]% for [redacted] images.
- Failure to process rate for [redacted] was [redacted]% vs [redacted]% for [redacted]. Failure to process rate for [redacted] was around [redacted]%.
- Matching accuracy for [redacted] was [redacted]% vs [redacted]% for [redacted]. Matching accuracy for [redacted] was [redacted]%.
- Generally [redacted] performed a better job of differentiating imposter vs genuine comparisons with a slight advantage to [redacted].
- True Match Rate for [redacted] was [redacted]% vs [redacted]% for [redacted]. [redacted] for [redacted] images was [redacted]%.
- Images from both vendors perform well in keeping false match rates to roughly [redacted]%.

Notes:

- [redacted]
- This analysis is limited to trips that had both probe images and source images captured.

HIGH LEVEL FINDINGS



(b) (7)(E)

(b) (4), (b) (7)(C) (b) (7)(E)

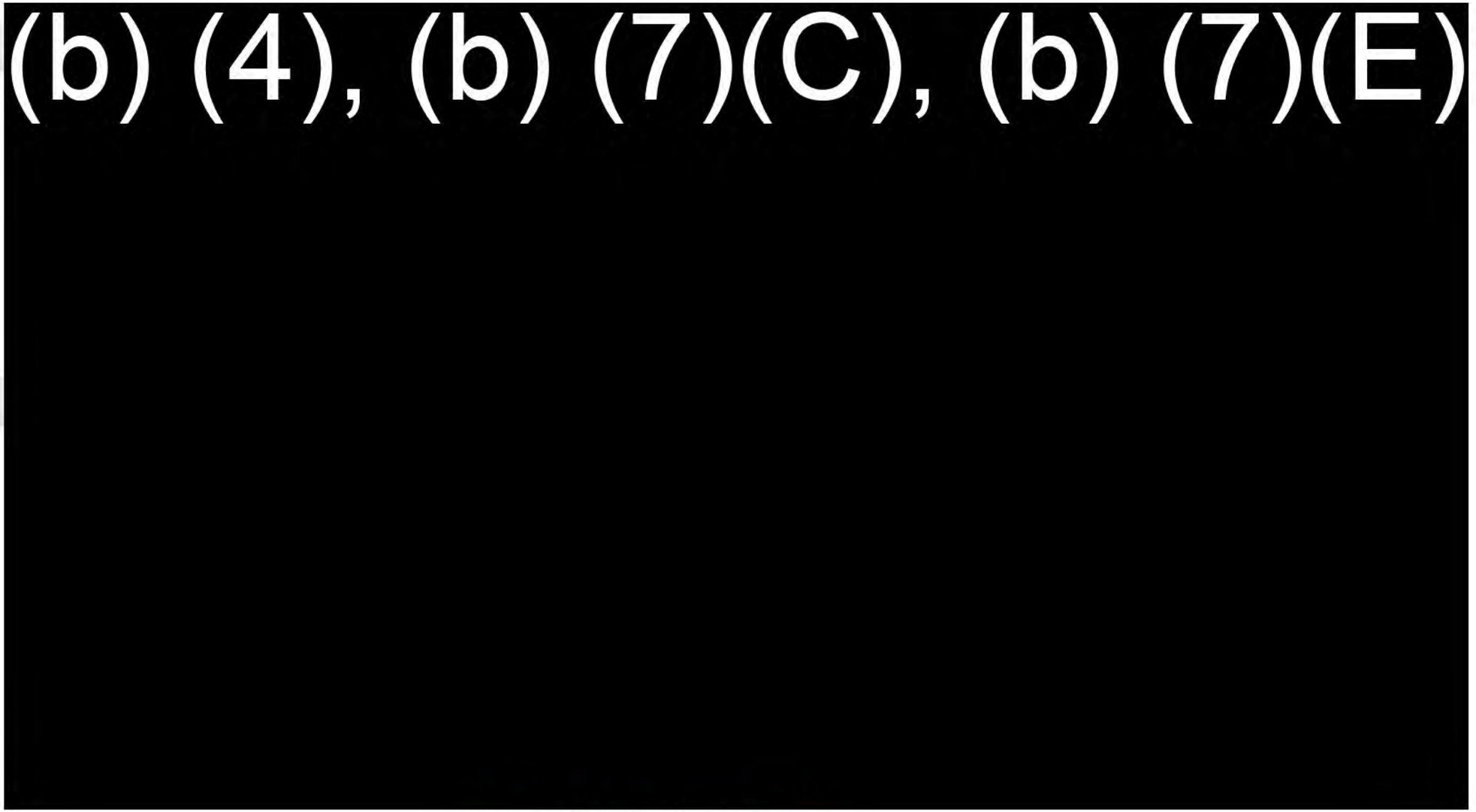
(b) (4), (b) (7)(C) (b) (7)(E)

For Official Use Only (FOUO)

BREAKDOWN OF ERROR RATES

(b) (4), (b) (7)(C)

(b) (4), (b) (7)(C)



APPROACH

Objective

- Analyze vendor image quality and face recognition performance using TVS 1:1 face verification system.

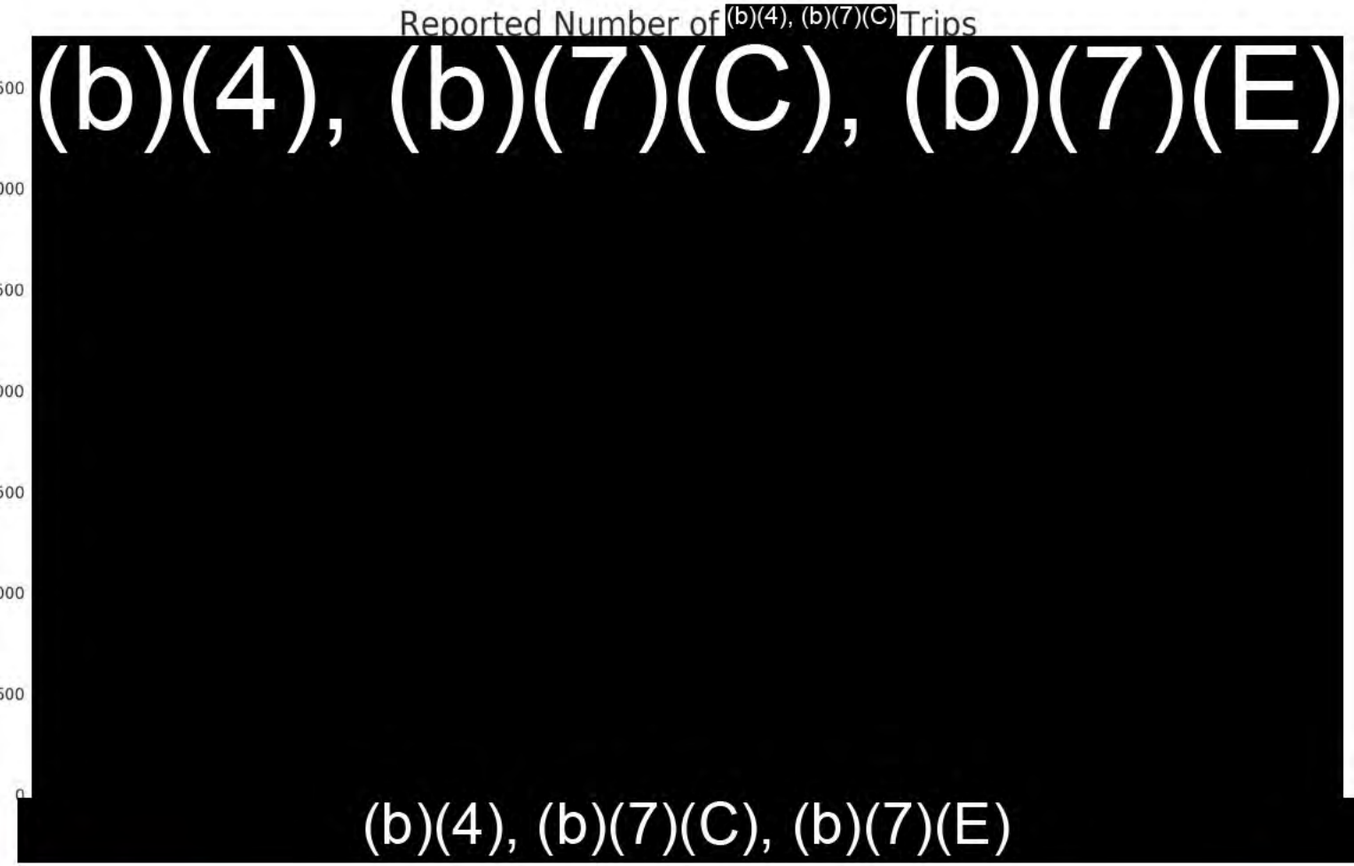
Methodology

- Sample a set of images from each vendor and submit to TVS for verification.
- Data collection
  - NEC NeoFace ([redacted]) *verify* was used to make 1:1 comparisons and results were used for analysis.
  - [redacted]
  - All trip data ([redacted] image comparisons) with both probe images and source images were ground-truthed as genuine and imposter comparison.
  - [redacted] probe images were categorized as [redacted].
- Performance measurement matrices
  - Capture Rate
  - [redacted]
  - Accuracy
  - [redacted]

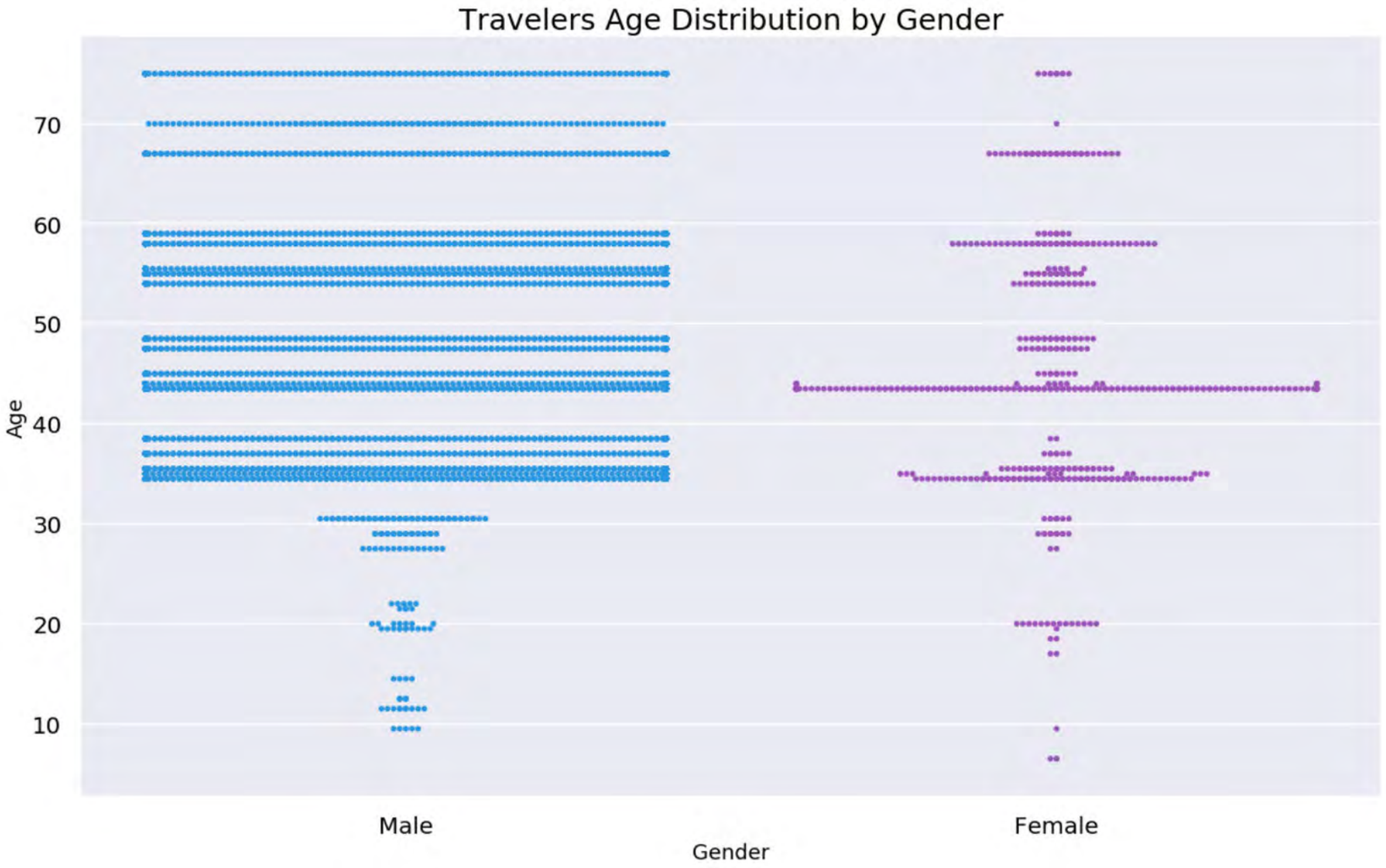
DATA DISCREPANCY BETWEEN PORT OF BUFFALO AND PARE

The overall trend for the number of trips from PARE system shows around (b) (7)(E) trips daily on average. However the graph shows the number of trips (b) (7)(E) significantly to about (b) (7)(E) trips on average at the beginning of May, which coincides with the installation of the (b) (4), (b) (7)(C) cameras. The graph trends upward again starting at the beginning of June. The number of trips reported by the Port of Buffalo is higher than reported trips in PARE, almost every day of this two week study. Around (b) (7)(E) of trips reported by the Port of Buffalo did not get captured within PARE. (b) (7)(E) trip numbers were reported for (b) (7)(E) (b) (7)(E) Further investigation is needed to determine if this is a true anomaly.

Row Labels	Day of the Week	Port of Buffalo Reported Trips	PARE Reported Trips	Difference	% Difference
5/12/19	Sunday	(b) (7)(E)			
5/13/19	Monday				
5/14/19	Tuesday				
5/15/19	Wednesday				
5/16/19	Thursday				
5/17/19	Friday				
5/18/19	Saturday				
5/19/19	Sunday				
5/20/19	Monday				
5/21/19	Tuesday				
5/22/19	Wednesday				
5/23/19	Thursday				
5/24/19	Friday				
5/25/19	Saturday				
5/26/19	Sunday				
Grand Total					



TRAVELER PROFILE



Note

- This shows the overall breakdown of travelers age estimate by gender captured by the vendor cameras. (b)(7)(E)

(b)(7)(E)

- The majority of the travelers were classified to be males between the age of 35 and 60 years old.

(b) (4), (b) (7)(C) DATA BREAKDOWN

(b) (4), (b) (7)(C) camera was able to capture probe images for approximately (b) (7)(E) of the trips that are reported in PARE. Only (b) (7)(E) of PARE reported trips had usable data (trip with both probe and source image) for the (b)(7)(E) team to analyze. The usable data corresponds to (b) (7)(E) image comparisons analyzed for this study. (b) (4), (b) (7)(C) image comparisons are further broken down by image type ((b) (7)(E)) .

		12-May	13-May	14-May	15-May	16-May	17-May	18-May	19-May	20-May	21-May	22-May	23-May	24-May	25-May	26-May	Total
A	PARE Reported (b) (4), (b) (7)(C) Trips	(b) (7)(E)															
B	Probe Image: Missing Source Image: Missing																
C	Probe Image: Present Source Image: Missing																
D	Probe Image: Missing Source Image: Present																
E	**Probe Image: Present Source Image: Present**																
(C+E)/A	**Capture Rate (Trips with Probe Images)**																
E/A	**% Trips with Usable data (both images present)**																
F	**Total # of Comparisons Analyzed**																

(b) (4), (b) (7)(C) DATA BREAKDOWN

(b) (4), (b) (7)(C) camera was able to capture probe images for approximately (b) (7)(E) of the trips that are reported in PARE. Only (b) (7)(E) of PARE reported trips had usable data (trip with both probe and source image) for the (b)(7)(E) to analyze. This corresponds to (b) (7)(E) mage comparisons analyzed for this study.

		12-May	13-May	14-May	15-May	16-May	17-May	18-May	19-May	20-May	21-May	22-May	23-May	24-May	25-May	26-May	Total
	(b) (4), (b) (7)(C) Trips	(b) (7)(E)															
	Uncorrelated Trips																
A	**Correlated Trips to Perceptics on LPR**																
B	Probe Image: Missing Source Image: Missing																
C	Probe Image: Present Source Image: Missing																
D	Probe Image: Missing Source Image: Present																
E	**Probe Image: Present Source Image: Present**																
(C+E)/A	**Capture Rate (Trips with Probe Images)**																
E/A	**% Trips with Usable data (both images present)**																
F	**Total # of Comparisons Analyzed**																

FAILURE TO PROCESS

(b) (4), (b) (7)(C) trips reported in PARE are broken down by image type (b) (7)(E) for calculating performance measurement matrices.

		(b)(4), (b)(7)(E)	(b)(4), (b)(7)(E)	(b)(4), (b)(7)(E)
A	Total # of Trips analyzed	(b) (7)(E)		
B	Total # of comparisons analyzed			
C	Template Created (TVS Success)			
D	# Comparisons with Face not Detected (TVS Failure)			
E	# Comparisons with images Failed to Decode (TVS Failure)			
F	#Comparison with Poor image quality (TVS Failure)			
(D+E+F)/ B	**Failure to Process Rate (FtP)**			

(b) (7)(E) had a (b) (7)(E) failure process rate using (b) (7)(C), (b) (4) grayscale images compared to (b) (4), (b) (7)(C) images (b) (7)(E) In general, (b) (7)(E) images perform better than (b) (7)(E) images.

CONFUSION MATRIX

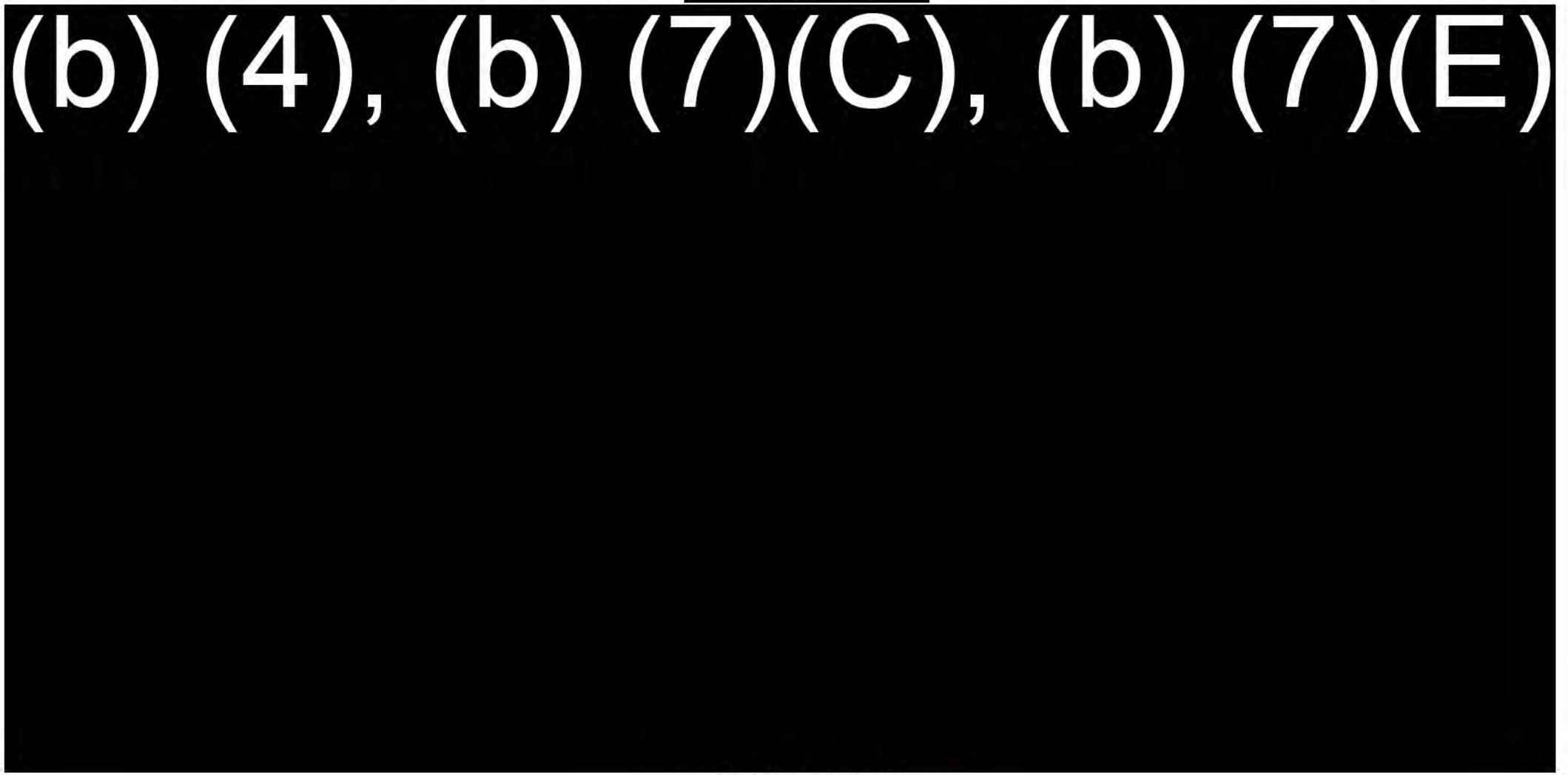
The (b) (7)(E) shows the relationship between what was classified by (b) (7)(E) and what the (b) (7)(E) was.

(b) (4), (b) (7)(C), (b) (7)(E)

- NEC NeoFace currently used in TVS has a match score threshold set to (b) (7)(E)
- Each TVS predicted (verification system decision) values are grouped in to (b) (7)(E)
- This (b) (7)(E) is used to calculate error rates on the next slide

ERROR RATES

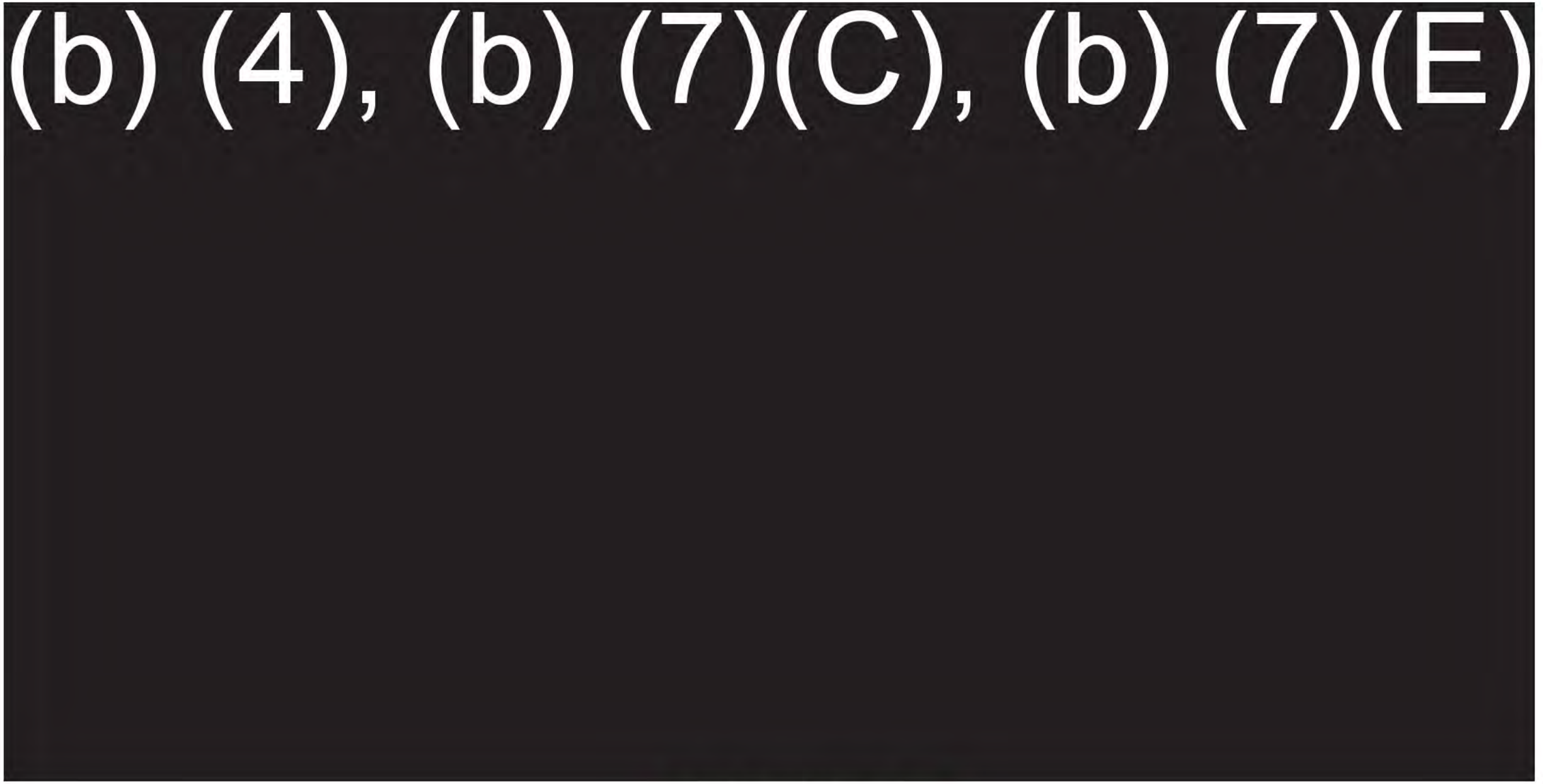
Only successful TVS verification responses (templatized comparisons), whether they are a match or no-match, and ground-truthed data are considered when calculating the error rates in the chart below. The chart suggests all three camera types performed at a similar level with a slight advantage to (b) (4), (b) (7)(C) images over (b) (4), (b) (7)(C) images (b) (7)(E)



(b) (7)(E)

(b) (4), (b) (7)(C), (b) (7)(E)

GENUINE VS IMPOSTER SIMILARITY SCORE DISTRIBUTION



(b) (7)(E)

(b) (4), (b) (7)(C), (b) (7)(E)

(b) (4), (b) (7)(C), (b) (7)(E)

DEFINITION OF PERFORMANCE MATRICES

- Capture Rate : Overall, how often the vendors were able to capture a traveler's image and send to PARE.
- (b) (7)(E)
- TVS Successful Verification Response Rate (Template Creation Rate): Overall, how often the verification attempt returned a successful response whether it was a Match or a No-Match.
- Threshold: An operational point where a match score is defined as verified or rejected.
- (b) (7)(E)
- Accuracy: Overall, how often TVS is classifying comparisons correctly.

(b) (7)(E)

U.S. Customs and Border Protection

SIMPLIFIED ARRIVAL AIR

TECHNICAL TRAINING

TRAEN Code: (b)(7)(E)

Passenger Systems Program Directorate (PSPD)

Field Readiness & Deployment Support (FRDS)

(b)(7)(E)@cbp.dhs.gov

SIMPLIFIED ARRIVAL AIR – LOGIN SCREEN

U.S. Customs and Border Protection

(b)(7)(E)

LANDING PAGE

SIMPLIFIED ARRIVAL AIR

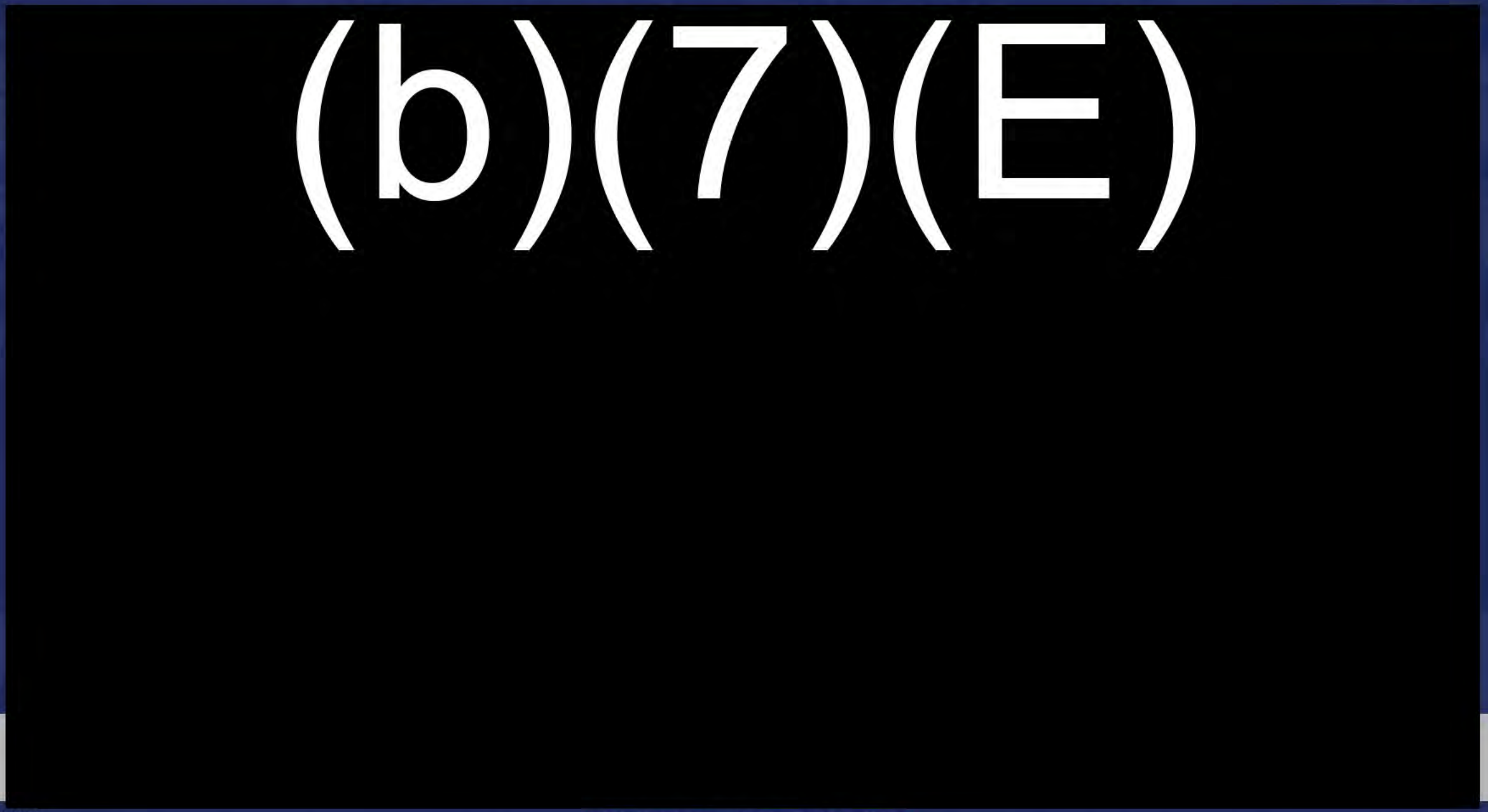
SIMPLIFIED ARRIVAL AIR – LANDING PAGE

U.S. Customs and Border Protection

(b)(7)(E)

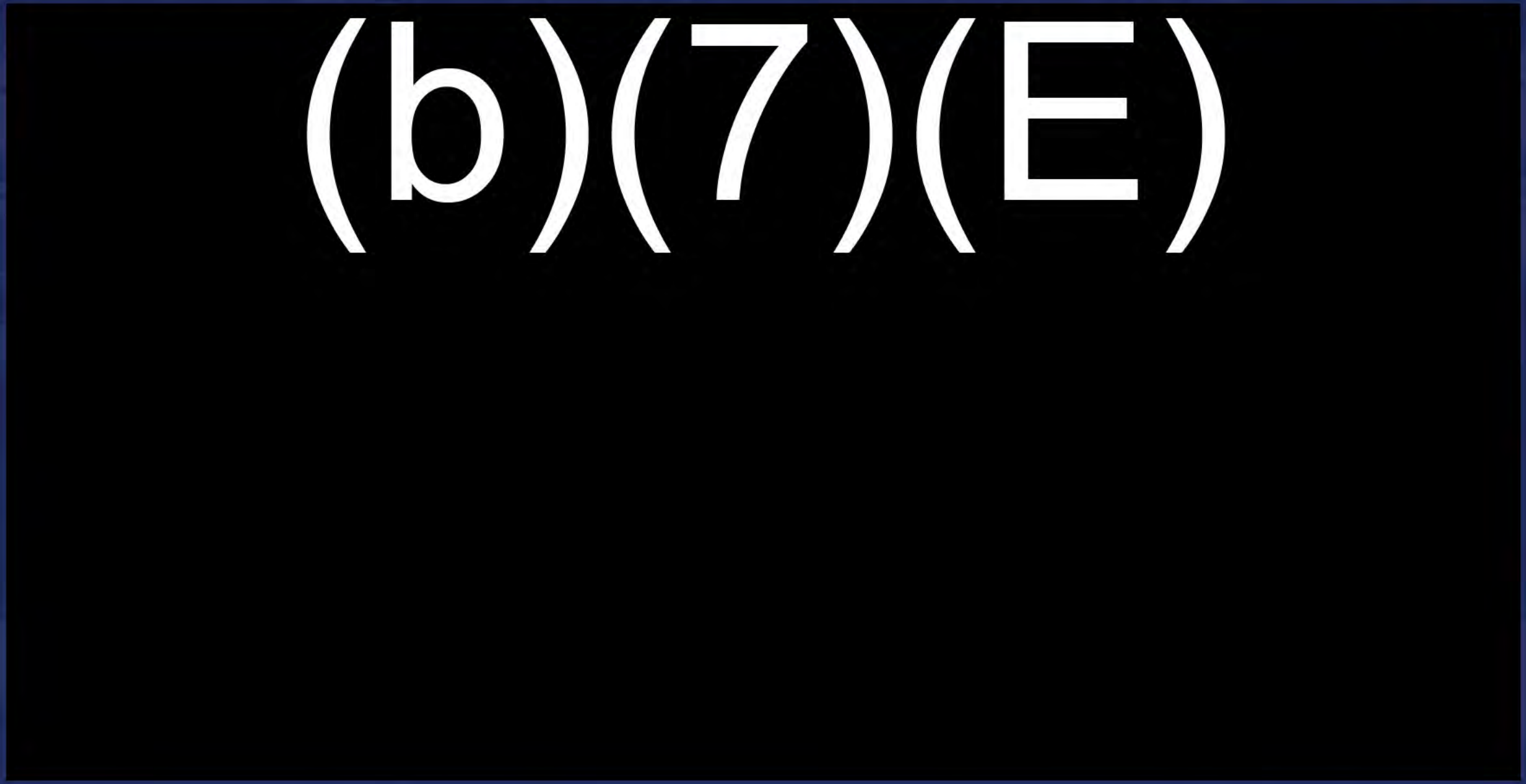
SIMPLIFIED ARRIVAL AIR – LANDING PAGE

U.S. Customs and Border Protection



SIMPLIFIED ARRIVAL AIR – LANDING PAGE

U.S. Customs and Border Protection



PROCESSING TRAVELERS

SIMPLIFIED ARRIVAL AIR

SIMPLIFIED ARRIVAL AIR – PROCESSING TRAVELERS

U.S. Customs and Border Protection

There are two options to begin processing travelers: Pause and Capture and On the Move.

PAUSE AND CAPTURE

For pause and capture, have the travelers stop in front of the camera to allow the system to capture the photo and begin processing them.

ON THE MOVE

For on the move, as travelers approach the booth, the system captures their photo and begins processing them.

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – CAMERA OPTIONS

U.S. Customs and Border Protection

(b)(7)(E)

Note: (b)(7)(E)

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – PROCESSING TRAVELERS

U.S. Customs and Border Protection

PHOTO MATCH FOUND

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – PROCESSING TRAVELERS

U.S. Customs and Border Protection

(b)(7)(E)

SCREEN FEATURES

SIMPLIFIED ARRIVAL AIR

SIMPLIFIED ARRIVAL AIR – TRAVEL HISTORY

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – TRAVEL HISTORY DETAILS

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – FINGERPRINT (b)(7)(E)

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – FINGERPRINT PROCESS

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – FINGERPRINT PROCESS

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – BIOMETRIC (b)(7)(E)

U.S. Customs and Border Protection

(b)(7)(E)

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – (b)(7)(E)

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – ENFORCEMENT SUMMARY

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – (b)(7)(E) RECORD LIST

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – (b) (7)(E) RECORD DETAILS

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – CLASS OF ADMISSION

U.S. Customs and Border Protection

(b)(7)(E)

EXCEPTIONS

SIMPLIFIED ARRIVAL AIR

SIMPLIFIED ARRIVAL AIR – RECALL TRAVELER

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – RECALL TRAVELER

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – NO MATCH FOUND

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – MULTIPLE MATCHES FOUND

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – MULTIPLE MATCHES FOUND

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – DATA DISCREPANCIES

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – MANUAL DATA ENTRY

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – OVERRIDE PHOTO MATCH

U.S. Customs and Border Protection

(b) (7)(E)

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – DOCUMENT PHOTO MISMATCH

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – REFERRAL

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – MODIFY INFORMATION

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – MODIFY INFORMATION

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – OPT OUT FROM PHOTO CAPTURE

U.S. Customs and Border Protection

US citizens can opt out of facial biometrics.

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – OPT OUT FROM PHOTO CAPTURE

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – RESTART (b)(7)(E)

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – REPORT A PROBLEM

U.S. Customs and Border Protection

(b)(7)(E)

SIMPLIFIED ARRIVAL AIR – HELP WEBSITE

U.S. Customs and Border Protection

The Simplified Arrival Air Help website provides an immersive, user-friendly experience designed to help you learn about the features and functionality available within the application.

You can access the website by one of the two following ways:

- (b)(7)(E)
- (b)(7)(E)

(b)(7)(E)

Below are some features of the Help Website:

- What's New? – Provides information on updates made to SA Air
- FAQs – Provides answers to commonly asked questions about SA Air
- How To Page – Offers instructions on how to use SA Air
- If/And/Then Table – Provides information on what to do for common scenarios
- Troubleshooting Page – Offers directions on how to solve system issues

SIMPLIFIED ARRIVAL AIR – HELP WEBSITE (Continued)

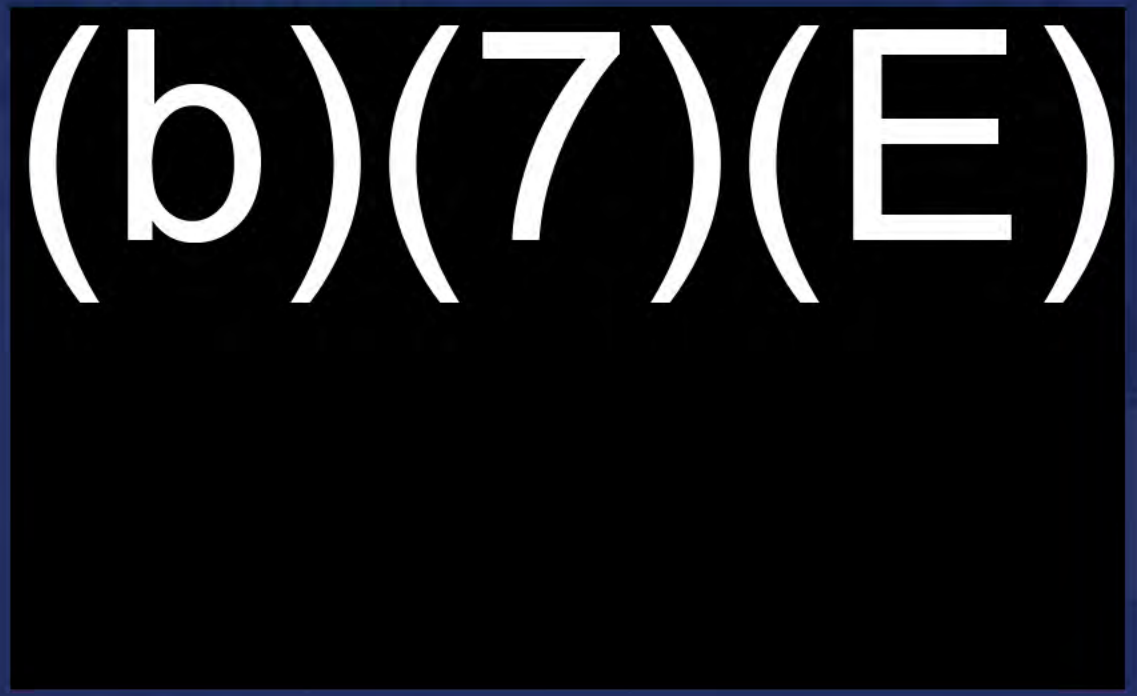
U.S. Customs and Border Protection

The Simplified Arrival Air Help website provides an immersive, user-friendly experience designed to help you learn about the features and functionality available within the application.

Resources Menu – Includes the following training resources

- Interactive Tutorial – Allows you to practice using SA Air in a non-PROD environment
- QRCs – Provides condensed information about a specific topic within the application
- User Guide – Offers detailed instructions on how to use SA Air
- This Presentation

Additionally, for each of the training resources available, there are icons located at the bottom of the Home page.



U.S. Customs and Border Protection

Functional Requirements Document:

Simplified Arrival

Phase I – Primary Redesign

July 2017

FRD

Functional Requirements Document (FRD)

for

Simplified Arrival – Primary Redesign

Submitted by: (b)(6) (b)(7)(C) 7/18/17

Program Manager, Entry Office, OFO PPAE **Date**

Endorsed by: (b)(6) (b)(7)(C) 7/19/2017

Director, Entry Office, OFO PPAE **Date**

Approved by: (b)(6) (b)(7)(C) 7/19/2017

Executive Director, OFO PPAE **Date**

Change Control Log

Version	Date	Comments	Modified By
0.1	6/5/2017	Initial Draft for discussion with PSPD	OFO EXT
0.2	6/12/2017	Reviewed by stakeholders	OFO APP
0.3	6/16/2017	Joint PSPD and OFO EXT Review	OFO EXT/OIT PSPD

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Simplified Arrival Functional Requirements

1. Introduction

U.S. Customs and Border Protection (CBP) is reengineering the entry process through incorporation of advanced facial recognition biometric technologies which will provide significant facilitation benefits while increasing security and enforcement throughout the travel continuum. Today, travel documents such as a passport or visa serve as the necessary pointer to a traveler's identity, travel history, and any enforcement concerns that may require attention prior to admission to the United States.

The Simplified Arrival project is a phased technology demonstration leveraging cooperation between CBP and government partners and air carriers that uses biometrics to improve inspectional efficiency.

Simplified Arrival will test the technical capability and operational impact of leveraging facial recognition technologies to facilitate and expedite the processing of arriving passengers and airline crew while enhancing security.

Using facial recognition as the primary biometric verification modality reduces infrastructure needs as it performs at stand-off distances, removes the need to segment travelers, and provides a previously unavailable method to verify and facilitate travel for almost everyone, not just those travelers for whom DHS has fingerprints.

Background

CBP has implemented a comprehensive fingerprint identification and verification system, however, fingerprints are not facilitative in the travel process. The current system requires a travel document read prior to fingerprint collection to identify the individual's stored identity to compare the current captured fingerprints to. While fingerprint biometrics will always be the foundation of CBP's enforcement program, advancements in other biometric technologies allow a more facilitative approach to biometrically confirming one's already established identity just as fingerprints are used today.

1.2 Technology Demonstration Concept

CBP will demonstrate the Simplified Arrival at a few International Airports. For the demonstration, all travelers from the selected flight(s) will proceed to the entry lanes within the Federal Inspection Services (FIS), where a camera will capture an image of the traveler's face unassisted and automatically query the image against known identities to biometrically identify the traveler. Once the traveler is matched, the CBP Officer will have the traveler's biographic data, along with any derogatory information and associated query results. The CBP Officer will conduct a thorough inspection and establish the purpose and intent of travel. Once admissibility is determined, the traveler is either referred to secondary or directed to baggage claim. Once admitted, the crossing history of the traveler will be updated to reflect a biometrically confirmed arrival into the U.S.

2. Functional Requirements

1.1 General Requirements

The Simplified Arrival requirements are uniquely identified in Table 1.

Table 1. Functional Requirements

Identifier	General Requirements for Phase 1	Phase
1	The system shall provide the ability to use biometrics as an alternative to using travel documents to identify a traveler.	
2	The system shall comply with DHS security requirements, including physical security, network, application, data, data encryption, and operating system security.	
3	The system shall provide role-based system access privileges in accordance with DHS policy.	
4	A DHS warning banner shall be displayed on the first screen prior to accessing the system.	
5	An audit trail will be in place to track the logon, logoff and all actions of users identified by logon ID.	
6	The system shall provide the ability to identify flights, groups of flights, groups of travelers, and sites to participate in Simplified Arrival.	
7	The system shall capture a live image of a unique traveler prior to or in primary processing without requiring officer involvement.	
8	The system shall consider a traveler unique if a configurable amount of time has passed since the last live photograph capture for the same individual. • (b) (7)(E)	
9	The system shall transmit the live photo to the backend matching service.	
10	The system shall consider a match successful if the live photograph matches a source photograph above the predefined threshold.	
11	(b)(7)(E)	
12	The system shall use the identity information returned from the live photo search to perform existing primary enforcement queries and, if air, retrieve APIS manifest information.	
13	(b) (7)(E)	
14	(b)(7)(E)	

15	The system shall indicate if travelers are not matched to a known identity.	
16	The system shall indicate if travelers are matched to multiple identities and request the officer to scan the travel document then compare the biographic information to the matched identities to determine if the traveler matches the stated identity.	
17	The system shall indicate if a traveler has already been processed and when.	
18	The system shall display the live photograph next to the matched photograph.	
19	The system shall provide the ability to override the matched identity information as a non-match: • (b)(7)(E) • (b)(7)(E)	
20	The system shall provide the ability for the officer to scan or enter a travel document to access the traveler's record.	
21	If no match is found for the live photograph, the system shall prompt the officer to scan a valid travel document or select Non-Traveler (ex., airport workers, and CBP employees). In the case of a non-match, the system shall allow the officer to: • Scan a valid travel document; or • Manually input traveler data for query. In the case of a non-traveler, the system shall allow the officer to: • Identify the image as a non-traveler; • Select a reason for non-match; • Upon input of the reason, the system shall remove the photograph and create an audit record.	
22	When a travel document is scanned, the system shall perform existing primary enforcement queries.	
23	When a travel document is scanned, the system shall search any available manifest per existing requirements.	
24	The system shall display enforcement information per current primary processing of (b)(7)(E) information	
25	The system shall perform all existing functions of primary processing, not previously mentioned, to include, but not limited to: • (b)(7)(E) • (b)(7)(E) • Class of Admission capture • I-94 generation	

	• Date, time, terminal keystroke and display auditing • Confirmation of manifest record/creation of crossing history record • Record the document number and type used for admissibility Allow updates, per existing protocols, to previously processed travelers.	
26	The system shall add live photo to all referrals, regardless of citizenship.	
27	The CBP Secondary system shall have the ability to receive and display live photographs included in referrals.	
28	The system shall forward all successful non-USC facial biometric matches to (b)(7)(E) for biometric encounter history recording.	

Identifier	General Requirements for Phase 2	Phase
29	The system shall continuously scan for live image and submit all unique travelers to the TVS for identification.	
30	The system shall provide the ability to select multiple travelers to process together as a family unit all receiving the same Class of Admission / Admit Until Date.	
31	The system shall process all selected travelers at one time provided no unviewed/cleared (b)(7)(E) information exists for any of the travelers selected.	
32	The system shall search all unique travelers against an actionable face-based (b)(7)(E) and provide results to CBP once the (b)(7)(E) is identified.	
33	The system shall push an alert to the primary officer when a facial (b)(7)(E) is encountered.	
34	When an ePassport is scanned, the system shall provide a 1:1 comparison of the live photograph and the ePassport photograph.	
35	When a travel document is queried and a live photograph has been captured, the system shall provide a 1:1 comparison of the live photograph and photos available in DHS holdings if the individual has DHS photos available.	
36	The system shall accept biographic data and photos from outside sources (b) (5) of expected travelers and compare to photos on file in Gov't holdings for that individual. a. If a match is made (verified traveler), associate the provided photo to the identified traveler and include the provided photo for matching the traveler upon arrival.	

	b. If a match is not made (unknown traveler), include the photo and associated biographics provided by outside sources for matching upon arrival.	
37	The system shall receive a live image of a traveler prior to primary processing. a. The camera used for live image capture shall be configurable to support one or more primary inspection terminal(s)/booth(s). b. The application used by officers in the primary terminal/booth shall be able to process travelers identified from multiple cameras.	

3. Scenarios

Table 2. Scenarios

Role	Description
Airport	The airport that is hosting the Simplified Arrival technology demonstration.
Airline	The airline whose crew/passengers are selected for the biometric Simplified Arrival technology demonstration.
Port	The CBP Port of Entry where entry processing lanes will be dedicated for the Simplified Arrival technology demonstration and will provide CBP Officers to support the demonstration
CBP System	CBP systems used for interfacing with airlines and foreign governments to receive traveler data, perform biometric matching, and process entry transactions.
Traveler	A crew/passenger who is arriving and will be processed through the Simplified Arrival entry processing lanes. The person checked-in with the airline, arrived in the U.S. and is entering the FIS. Both US Citizens and Foreign travelers are in scope of the Simplified Arrival demonstration. However, after a successful match and the crossing is recorded, U.S. Citizen biometric data used to obtain the match will be discarded.
Primary Officer	A CBP Officer responsible for inspecting and admitting travelers in the FIS and referring to secondary when necessary.

Secondary Officer	A CBP Officer responsible for any secondary inspection actions to include (b)(7)(E) and processing (b)(7)(E) information.
Analyst	A CBP Analyst responsible for consuming the system generated and observation metrics from the technology demonstration in order to draw conclusions to present to CBP leadership.

#	As a/an	I want	So that
1.0	Airport	To eliminate or at least minimize physical impact to the existing airport layout to support air entry operations	FIS redesign, capital expenditures, and facility disruption are not required.
2.0	CBP system	APIS manifest data from Airlines for flights participating in Simplified Arrival	I can build a manifest gallery of face images that will be used to match travelers upon arrival
2.1	CBP System	To accept photographic submissions from external stakeholders	External stakeholder provided photographs can be included in the gallery of photographs used to match the identity of travelers on the manifest
2.2	CBP System	Reliable connectivity between the camera and the backend system	The camera will operate properly when processing travelers
3.0	Airline	The arrival process to be streamlined	The traveler arrival experience is improved and airline operations are not negatively impacted.
4.0	Traveler	A seamless operation	I can be processed quickly and easily without being inconvenienced with additional time or hassle

#	As a/an	I want	So that
4.1	Traveler	Clear instructions for exactly what I am expected to do prior to seeing the Primary Officer	I know what actions I must take to continue through FIS
4.2	Traveler	Clear instructions on how to interact with the camera (for example, where to stand, how to look towards the camera, facial expressions, removing hats/clothing, removing coverings on my face, removing sunglasses, handling wheelchairs, handling group travel and handling babies)	I know what I am supposed to do for a successful biometric reading to continue seamlessly through FIS
4.3	Traveler	My personal and identifiable information protected	I am not a victim of identity theft
5.0	Primary Officer	The ability to access a traveler's record through the use of face biometrics	I do not need to scan travel documents to access the record when that individual is loaded in the gallery...
5.1	Primary Officer	An interface that includes a queue of live face images captured of travelers before me that have not yet been processed	I can select the traveler who approached me for inspection in the event the travelers arrive in a different order than their photo capture or several travelers arrive together such as families.
5.2	Primary Officer	An interface that displays the next-in-line live image next to the (b)(7)(E) (b)(7)(E) gallery image along with its associated biographic information, crossing history and any (b)(7)(E) information.	I can confirm the person in front of me correctly matched to their record and perform my primary inspection duties.
5.3	Primary Officer	The ability to admit a traveler who has successfully matched	To complete the primary inspection and create a biometrically confirmed entry record in existing systems of record.

#	As a/an	I want	So that
5.4	Primary Officer	(b) (7)(E) (b) (7)(E)	To complete the primary inspection and direct the traveler to secondary for additional processing.
5.5	Primary Officer	(b) (7)(E) (b) (7)(E)	I can query travel documents and use biographic data to access the traveler's record and perform a primary inspection per existing CBP procedures
5.6	Primary Officer	The system to not interfere with my ability through policy, training and experience to determine whether or not to interdict a traveler (regardless of the biometric match result)	(b) (7)(E) (b) (7)(E) (b) (7)(E) (b) (7)(E) (b) (7)(E)
5.7	Primary Officer	A system that can function on a variety of platforms (mobile tablet, mobile phone, or workstation)	I can use the Simplified Arrival solution in a variety of FIS or mobile configurations.
5.8	Primary Officer	Initiate a photo capture of a traveler	When the (b) (7)(E) (b) (7)(E), I can continue to process the passenger.
6.0	Secondary Officer	(b) (7)(E) (b) (7)(E)	
6.1	Secondary Officer	To have access to the referral reason, all biographic information, crossing history and any (b)(7)(E) information.	I can complete a secondary inspection following existing CBP procedures.
6.2	Secondary Officer	To know if the traveler did not successfully match to an image in the manifest gallery	I can perform further investigations on the traveler's true identity to determine if the traveler is an imposter or failed to match.

#	As a/an	I want	So that
7.0	Program Manager	The ability to view a dashboard containing operational statistic for Simplified Arrival system to include: • (b)(7)(E) • (b)(7)(E) • (b)(7)(E) • (b)(7)(E) • (b)(7)(E) • (b)(7)(E)	I have operational information for Simplified Arrival and can assess the impacts made to Primary.
8.0	Analyst	To access the following data related to the creation of the traveler manifest gallery prior to the flight boarding: • (b)(7)(E) • (b)(7)(E) • (b)(7)(E) • Source of photo (b)(7)(E) (b)(7)(E) • (b)(7)(E) • Known standards for photo • Image quality of photo • Age of photo • (b)(7)(E) • (b)(7)(E)	The quality and effectiveness of traveler manifest gallery data can be evaluated for facial image biometric checks at air entry
8.1	Analyst	The traveler gallery data to contain facial images from the following sources: • CBP Data Share (US Passport, Visa) • CBP Visa Waiver (Visa Waiver traveler passport at entry)	The quality and effectiveness of the various source images can be evaluated

#	As a/an	I want	So that
		• CBP Entry (e-chip photo at entry for non USC) • CBP APC (e-chip passport photo at APC kiosk entry for non USC) • USCIS (Non USC, LPR benefits applicants) • OBIM (b)(7)(E) (TPAC Air Entry, Visa application, USCIS benefits application, Border Patrol apprehension, APC entry, Global Entry application, Global Entry air entry)	
8.2	Analyst	To access the following data related to the facial capture process: • Live images captured • (b)(7)(E) • (b)(7)(E) • (b)(7)(E) • (b)(7)(E) • Image quality of photo • (b)(7)(E) • (b)(7)(E) • (b)(7)(E) • (b)(7)(E) • Observational description of environmental factors.	The quality and effectiveness of live facial image capture for travelers at the boarding gate can be evaluated
8.3	Analyst	To access the following post departure data related to the match results for each traveler: • (b)(7)(E)	The effectiveness of facial image matching on air entry for both 1:M and 1:1 scenarios can be evaluated

#	As a/an	I want	So that
		• (b)(7)(E) • (b)(7)(E) • (b)(7)(E) • (b)(7)(E)	
8.4	Analyst	To access the following data regarding referred travelers from Simplified Arrival (EA): • Number of travelers referred • Reason for referral	Analysis can be done on the impacts to staffing levels required in secondary.
8.5	Analyst	System availability metrics for the entry system	System reliability can be measured

SIMPLIFIED ARRIVAL PEDESTRIAN TRAINING

OFFICE OF FIELD OPERATIONS
CBP | 2019

Learning Objectives

(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

LEARNING OBJECTIVES

- Understand Simplified Arrival (SA), its applications, and current events.
- Understand how facial comparison technology is being implemented at your port.
- Understand the processes and procedures for using SA in the land environment .

For more Information, email (b)(7)(E)

Learning Objectives

NOW

We are here today to understand the importance of using biometric facial comparison technology to execute CBP's mission and to provide information and references to support the implementation of SA at your port.

(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

FUTURE

This training is SA focused, but future trainings will

(b) (5), (b) (7)(E)

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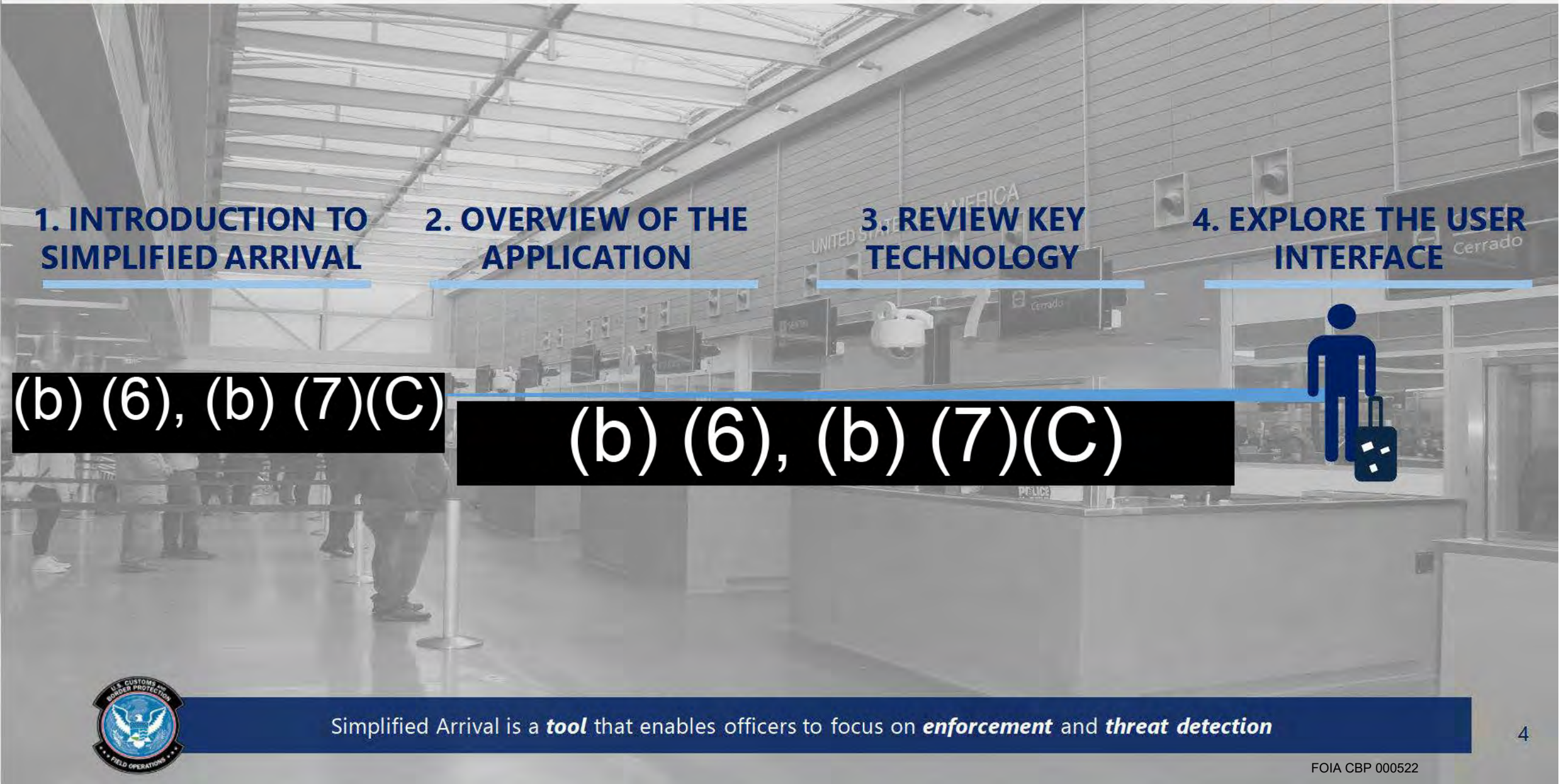


(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

Simplified Arrival is a ***tool*** that enables officers to focus on ***enforcement*** and ***threat detection***

Table of Contents – Introduction to Simplified Arrival

1 INTRODUCTION TO SIMPLIFIED ARRIVAL

- **Relevant Current Events**
- **An Advanced Tool for Enforcement**
- **Strengths of Facial Comparison Technology**
- **Vulnerabilities with Facial Comparison Technology**
- **Traveler Verification Service**

2. OVERVIEW OF THE APPLICATION

- Understanding the Primary Process
- Understanding the Secondary Process
- Success Stories From the Field
- Privacy and Traveler Concerns

3. REVIEW KEY TECHNOLOGY

- Highlight the key technology deployed at your port of entry

4. EXPLORE THE USER INTERFACE

- Step By Step Guide Through Each Screen

(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

(b) (6), (b) (7)(C)

Simplified Arrival is a ***tool*** that enables officers to focus on ***enforcement*** and ***threat detection***

Relevant Current Events

In an ever-changing adversary landscape, biometric solutions will be critical to CBP's success for safeguarding the homeland. Biometric solutions are new in deployment, but many have begun to recognize the value delivered through Simplified Arrival in enforcement at the border.

Facial comparison technology intercepts imposters at US-Mexico Border

Tuesday, October 16, 2018 by Chris Galford

Tweet Share Share Share

When two separate individuals attempted to enter the United States at the Port of San Luis in Arizona earlier this month, it was new facial comparison technology that identified inconsistencies between the passports and the people who stood before Customs and Border Protection (CBP) officers.

Both individuals were Mexican nationals from San Luis Rio Colorado, Mexico. One presented a border crossing card, while the other presented a lawful permanent resident document — neither, as it turned out, belonged to them. When they were referred to secondary inspection, the truth was confirmed, and CBP arrested both men.

"Facial comparison technology is an important step forward for CBP in protecting the United States from a variety of threats," Petra Horne, CBP's acting director of the Tucson Field Office, said. "Criminal elements continually look for creative techniques to enter the U.S. to include using stolen or rented genuine documents. This new facial recognition technology virtually eliminates the ability for anyone to use someone else's genuine document."

The identification marks the first time criminals have been caught through biometric technology in a pedestrian land environment. CBP now uses the technology for both entry and exit identification of travelers.

Individuals who are otherwise unable to gain legal entry to the United States will sometimes use U.S. passports that have been stolen, purchased, or "borrowed" to attempt to enter the country illegally. However, using another person's identity documents to enter the United States represents a violation of U.S. immigration law and could result in criminal prosecution.

Biometric ID spots imposters at land crossing

By Mark Rockwell Oct 15, 2018

Customs and Border Protection's tech trial of biometric entry/exit identification nabbed two imposters attempting to cross from Mexico into the U.S. near Yuma, Ariz., using someone else's border-crossing cards.

The apprehensions are the first by the entry/exit biometric facial recognition technology at a land border crossing, CBP officials said on Oct. 12.

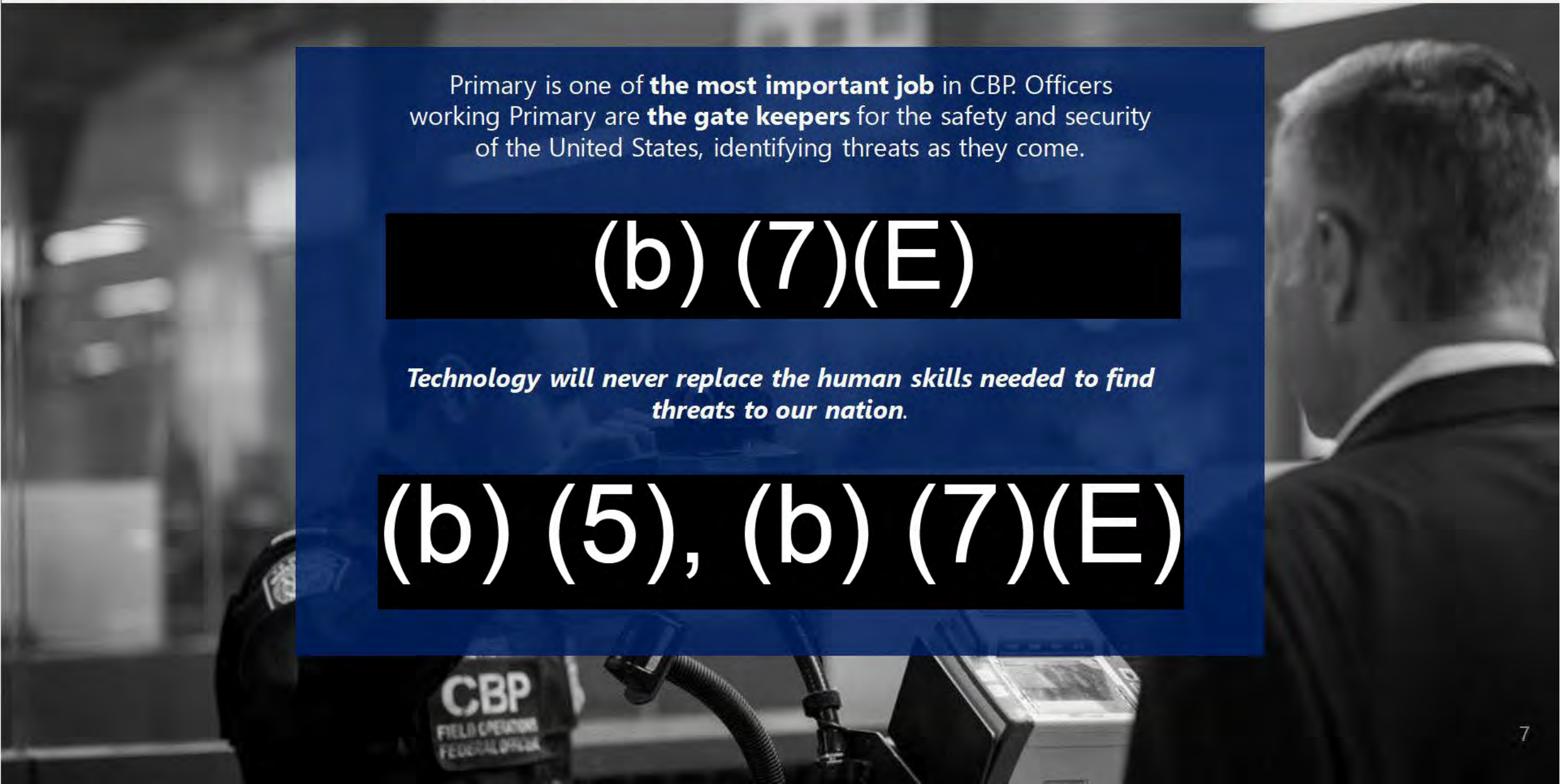
The two men were arrested within hours of one another at the same pedestrian crossing. According to the agency, the photos on their border-crossing cards didn't match the images taken at the pedestrian crossing. Both face criminal prosecution.

The biometric entry/exit system is more widely deployed in U.S. airports, but CBP is beginning to use it at pedestrian entry points at the border. The deployment at the San Luis Rio Colorado port of entry, which sits near the confluence of the borders of Arizona, California and Mexico, is a "technology demonstration," pending a wider deployment at other land ports of entry, according to CBP.

CBP's biometric entry/exit system at Dulles International Airport nabbed its first imposter in August. Dulles is one of 14 "early adopter" airports currently using the system, CBP said.

Source: Homelandprepnews.com October 16, 2018; Gcn.com October 15, 2018

Field Transformation: How Will Technology Change My Role?



Primary is one of **the most important job** in CBP. Officers working Primary are **the gate keepers** for the safety and security of the United States, identifying threats as they come.

(b) (7)(E)

Technology will never replace the human skills needed to find threats to our nation.

(b) (5), (b) (7)(E)

An Advanced Tool for Enforcement

FUTURE OF BIOMETRICS AS A TOOL FOR ENFORCEMENT

In the future, all travelers will be processed using biometrics upon entering and exiting the United States.

Biometric Photo Capture	Match Against Gallery	Primary Inspection	Admission to U.S.

- **This tool is for you, the officer. It will enable you to** (b)(7)(E) (b)(7)(E)
  - (b)(7)(E)

- **The use of biometric technology has lead to positive tangible results.**
  - 41 imposters have been caught during entry processing at San Luis.
  - 150 imposters have been caught during entry processing at Nogales.

*Tangible results as of September 25, 2019

Strengths of Facial Comparison Technology

WHY FACIAL COMPARISON?

1. CBP is taking advantage of **already existing traveler biometric (facial) and biographic information**. A high percentage of travelers CBP encounters have a photo—including visa photos, primary encounters, and certain enforcement data, US Passport, LPR card photos, etc.

2. Facial comparison **eliminates the need to verify fingerprints** each time a foreign national returns to the U.S., but [redacted].

3. Facial comparison on Entry allows Officers to [redacted].

4. Facial comparison technology is **accurate**. CBP (along with its DHS S&T partners) has established a rigorous algorithm performance monitoring and reporting capability. CBP match rate using facial comparison technology is **98% percent** in the pedestrian land environment.

Vulnerabilities with Facial Comparison Technology

Fingerprints: (b) (7)(E)

FACIAL COMPARISON VULNERABILITIES

(b) (6), (b) (7)(C)

(b) (7)(E)

(b) (6), (b) (7)(C)

Traveler Verification Service

TECHNICAL MATCH RATE OF SIMPLIFIED ARRIVAL IN THE PEDESTRIAN LAND ENVIRONMENT

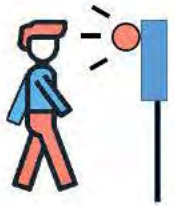
98%

(b)(7)(E)

(b)(7)(E)

WHAT IS THE TRAVELER VERIFICATION SERVICE?

The Traveler Verification Service is the backend system that performs the facial comparison function. This process is for travelers with a valid travel document.



1 Photo Capture

As the traveler approaches the processing booth a live photo is captured and the officer verifies that the photo is of the correct passenger.

2 Query Document

Once the traveler arrives at the processing booth, their travel documents are scanned (b) (7)(E)

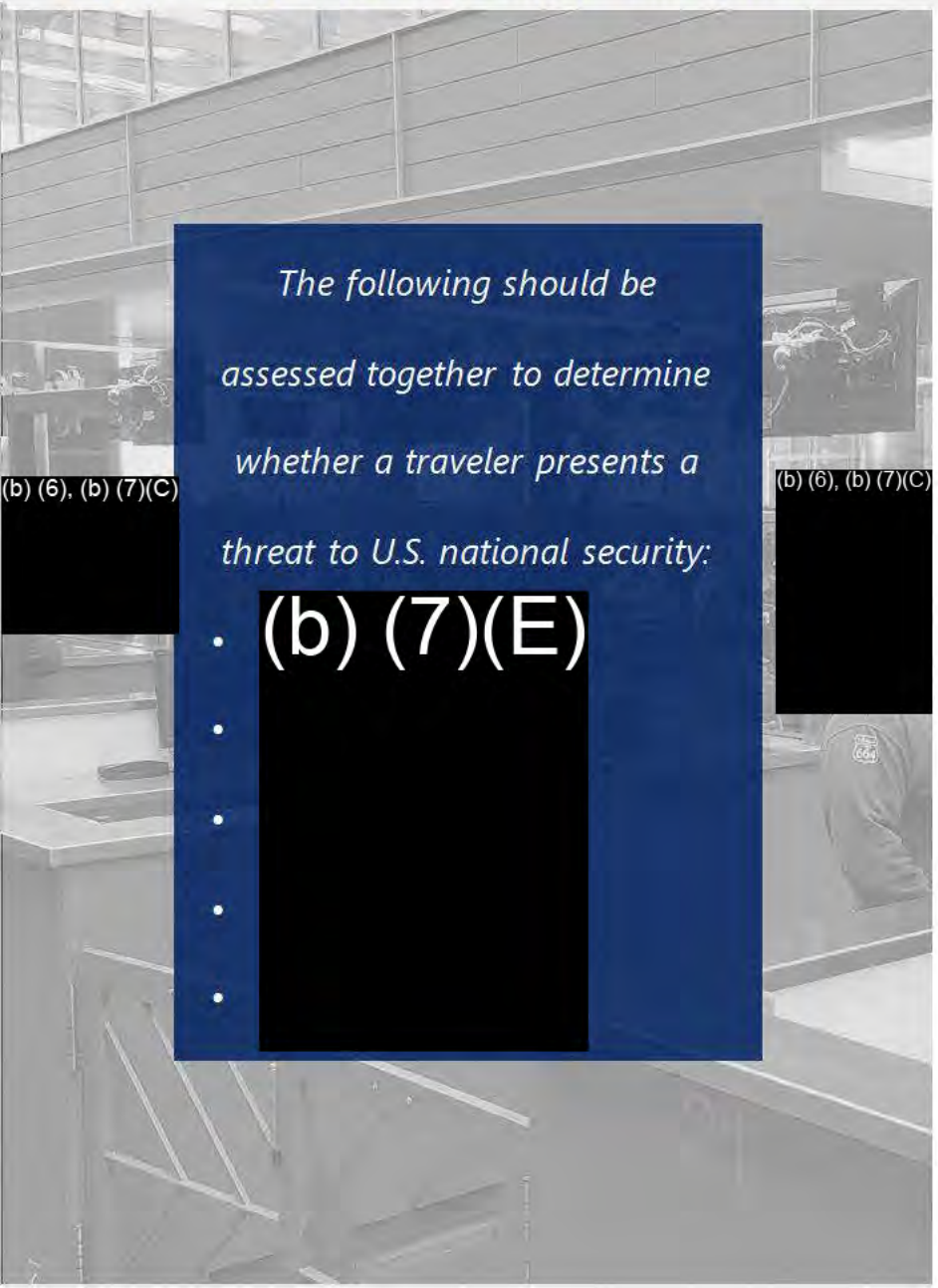
3 Photo Comparison

The live photo and source photo are compared using an advanced facial comparison algorithm for a one to one match.

4 Match Response

Once the comparison algorithm is complete, a "match" or "mismatch" will be returned and the officer can continue with the entry process.

Determining Traveler's Purpose and Intent

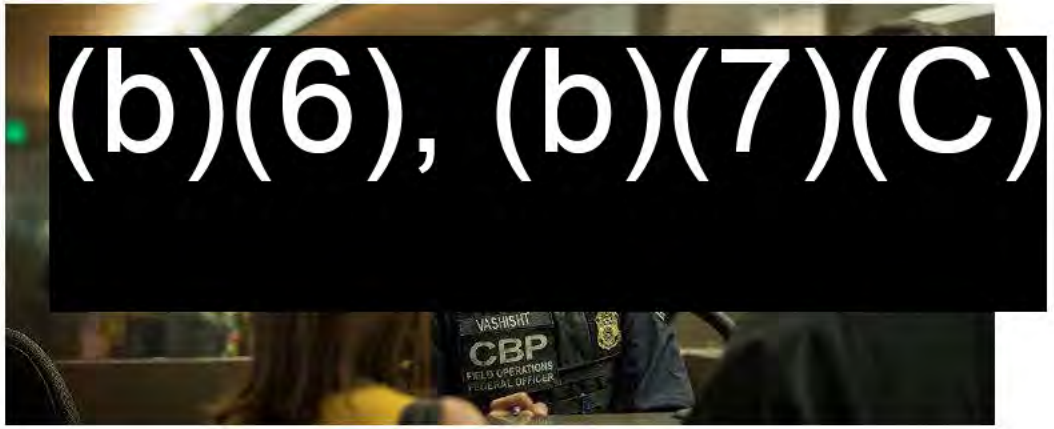


The following should be assessed together to determine whether a traveler presents a threat to U.S. national security:

- (b) (7)(E)
-
-
-
-

DETERMINING TRAVELER'S INTENT

Intent is determined through (b) (7)(E)



Always be sure to...

- (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)

Table of Contents – Overview of the Application

1. INTRODUCTION TO SIMPLIFIED ARRIVAL

- ✓ Relevant Current Events
- ✓ An Advanced Tool for Enforcement
- ✓ Strengths of Facial Comparison
- ✓ Traveler Verification Service

(b) (6), (b) (7)(C)

2 OVERVIEW OF THE APPLICATION

- **Understanding the Primary Process**
- **Understanding the Secondary Process**
- **Success Stories From the Field**
- **Privacy and Traveler Concerns**

(b) (6), (b) (7)(C)

3. REVIEW KEY TECHNOLOGY

- Highlight the key technology deployed at your port of entry

4. EXPLORE THE USER INTERFACE

- Step By Step Guide Through Each Screen

Simplified Arrival is a ***tool*** that enables officers to focus on ***enforcement*** and ***threat detection***

Understanding the Primary Process

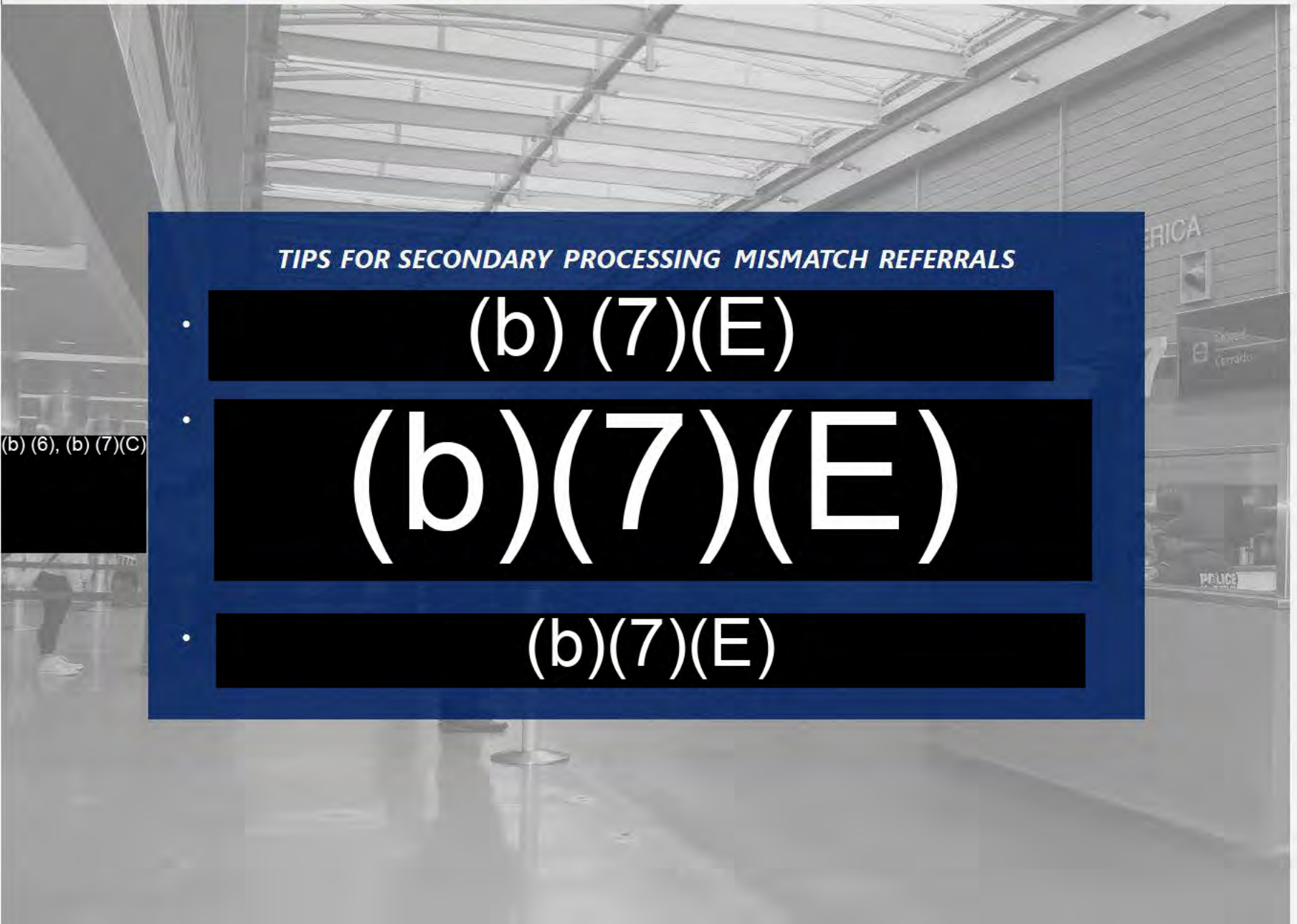
1 2 3 4

For operations [redacted] *, the following depicts the primary process using Simplified Arrival:*

Travelers Queue	Photos are Taken	Document Query and Match	Inspection

- Travelers arrive at their port of entry and **photos are taken** as they approach the CBP Primary workstation. A CBP Officer will collect and query the travel document.
- The CBP Officer ensures that the source photo and live photo is of the **person they are processing**.
- Simplified Arrival will send both photos (the live captured image and the source photo) to the CBP matching service called the **Traveler Verification Service (TVS)**.
- All information is stored in [redacted] cloud, which means faster matching. All processes have undergone a cyber review process to ensure all **data is secure**.
- The matching algorithm has been tested and is consistently monitored to ensure **reliability**.
- **Vigilance is still needed**; [redacted].

Understanding the Secondary Process



TIPS FOR SECONDARY PROCESSING MISMATCH REFERRALS

- (b) (7)(E)
- (b)(7)(E)
- (b)(7)(E)

(b) (6), (b) (7)(C)

(b) (7)(E)

Imposter at Nogales, AZ

(b)(7)(E)

Captured Photo Travel Document Photo Captured Photo Travel Document Photo

(b) (6), (b) (7)(C)

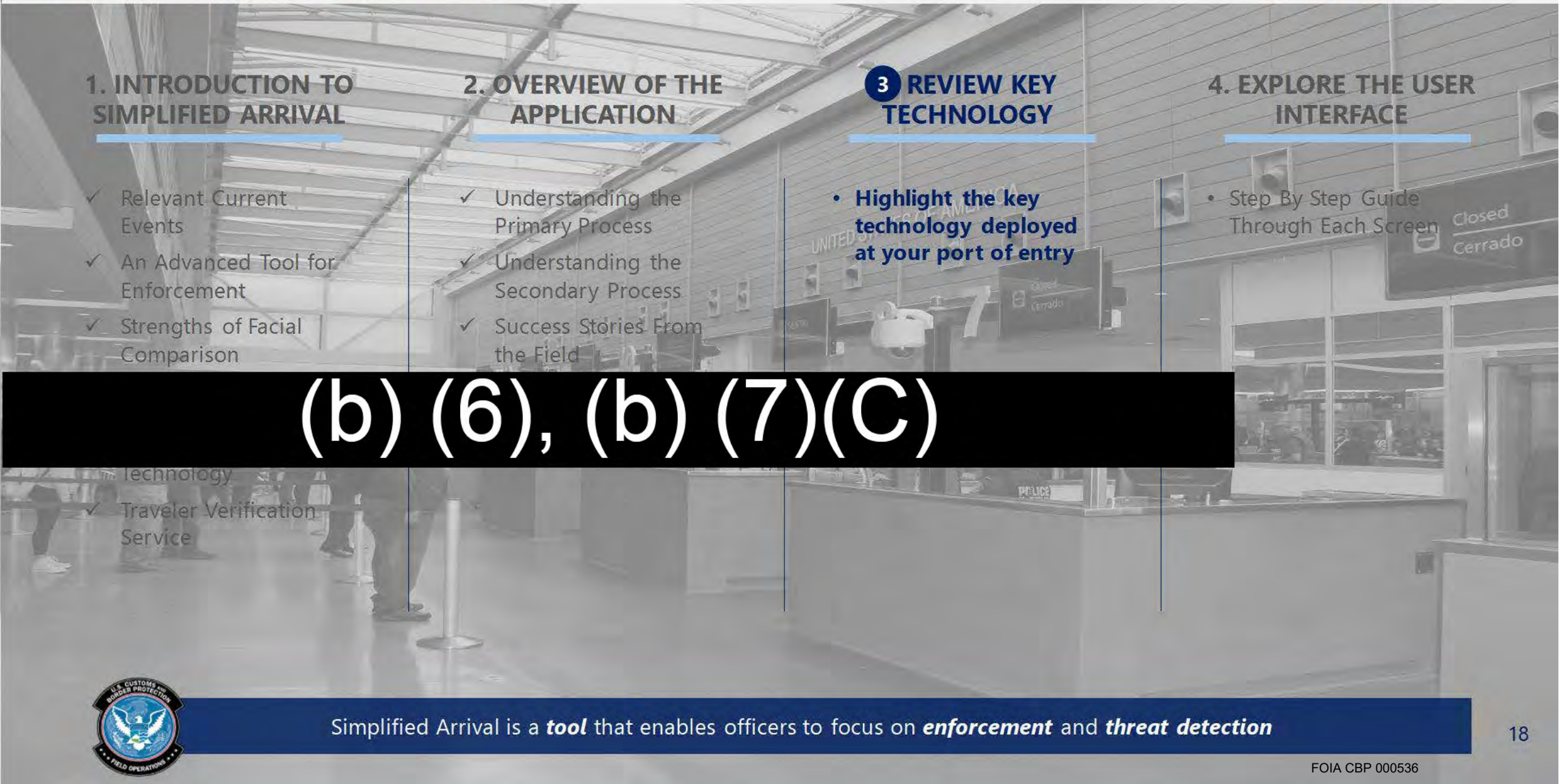
Photo Capture and Storage Guidelines

Remember that current law enforcement policies still apply. Therefore, nothing else in your day-to-day should change unless directed by your supervisor.

GUIDELINES FOR PHOTO CAPTURE

	Can I photograph the traveler in Primary?	How long is their photo stored?	Other Notes
Non-U.S. Citizen	✓ Always	14 Days in TVS	Photos are stored in (b)(7)(E) for 75 years for future identity verification. A diplomat can opt out.
U.S Citizen	✓ Can opt-out	12 Hours in TVS	U.S. Citizens are encouraged to participate, but are not required. If the camera has automatically taken a photo, you must delete it.
Children under 14 and travelers over 79	(b) (5)		

Table of Contents – Review Key Technology



1. INTRODUCTION TO SIMPLIFIED ARRIVAL

- ✓ Relevant Current Events
- ✓ An Advanced Tool for Enforcement
- ✓ Strengths of Facial Comparison

(b) (6), (b) (7)(C)

- ✓ Technology
- ✓ Traveler Verification Service

2. OVERVIEW OF THE APPLICATION

- ✓ Understanding the Primary Process
- ✓ Understanding the Secondary Process
- ✓ Success Stories From the Field

3 REVIEW KEY TECHNOLOGY

- **Highlight the key technology deployed at your port of entry**

4. EXPLORE THE USER INTERFACE

- Step By Step Guide Through Each Screen

Simplified Arrival is a ***tool*** that enables officers to focus on ***enforcement*** and ***threat detection***

Review of the Key Technology at your Port

(b)(7)(E)

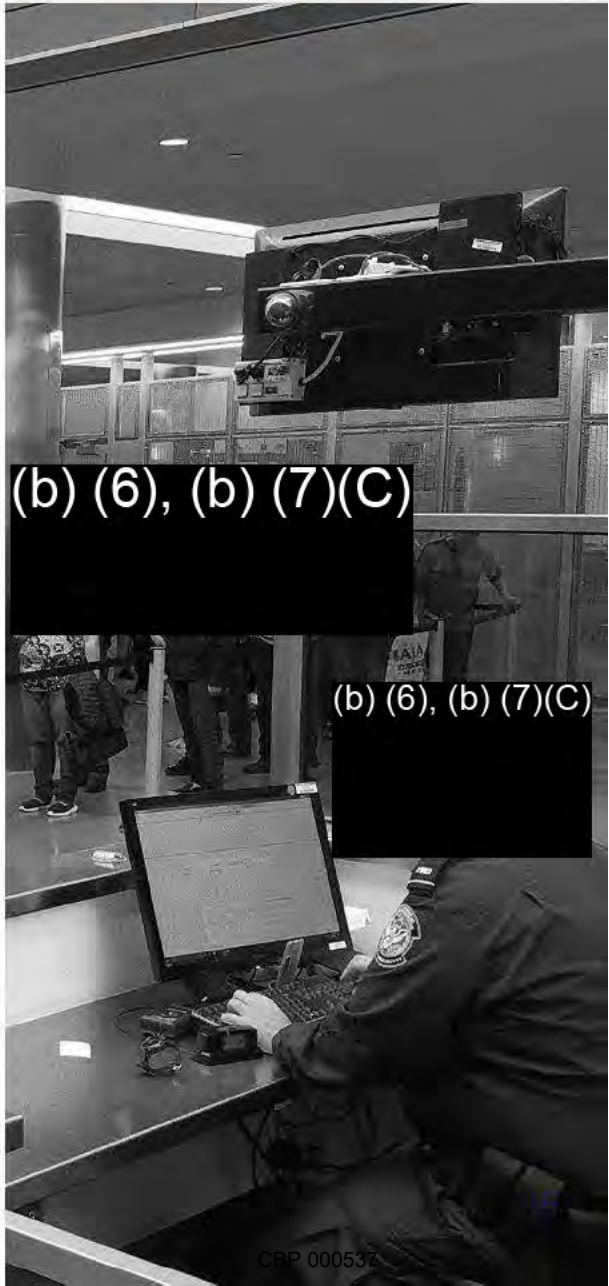


Table of Contents – Explore the User Interface

1. INTRODUCTION TO SIMPLIFIED ARRIVAL

- ✓ Relevant Current Events
- ✓ An Advanced Tool for Enforcement
- ✓ Strengths of Facial
- ✓ Traveler Verification Service

2. OVERVIEW OF THE APPLICATION

- ✓ Understanding the Primary Process
- ✓ Understanding the Secondary Process
- ✓ Success Stories From

3. REVIEW KEY TECHNOLOGY

- ✓ Highlight the key technology deployed at your port of entry

4 EXPLORE THE USER INTERFACE

- **Step By Step Guide Through Each Screen**

(b) (6), (b) (7)(C)

Simplified Arrival is a ***tool*** that enables officers to focus on ***enforcement*** and ***threat detection***

Step By Step Guide Through Each Screen: Process Overview

System Set Up

(b) (7)(E)

Process Passenger

Take photos, process documents, and interview travelers.

(b) (7)(E)

Review Match

Review system provided match or mismatch and

(b) (7)(E)

(b) (7)(E)

Review (b)(7)(E)

(b) (7)(E)

(b) (7)(E):

(b) (7)(E)

Admit or Refer

Admit or refer to Secondary based on current policies and directives.

Key Steps:

(b)(7)(E)

Logging In

(b)(7)(E)

(b)(7)(E)

(b)(7)(E)

Login Screen

(b) (7)(E)

(b) (7)(E)(b)(7)(E)

(b)(7)(E)

First Launch of SA – (b)(7)(E)

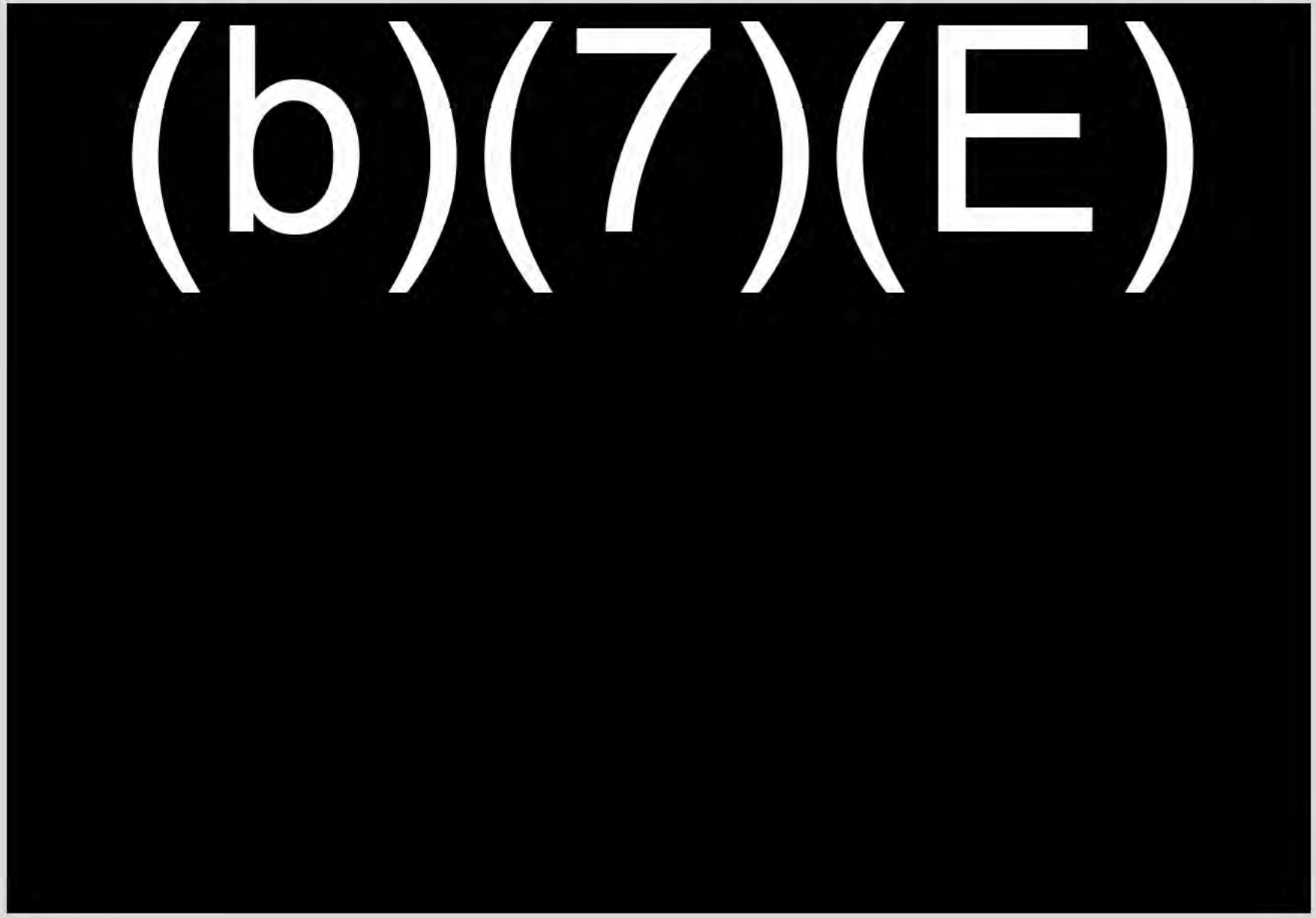
1 2 3 4

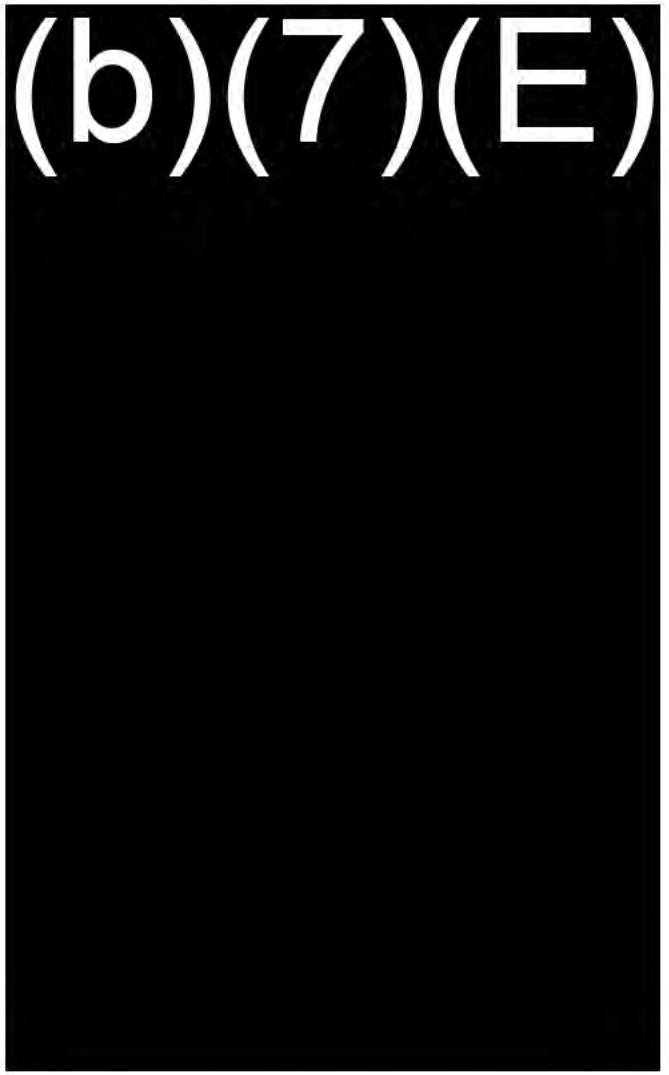
(b)(7)(E)

(b)(7)(E)

(b)(7)(E)

Home Screen





(b)(7)(E)

Process Traveler (b)(7)(E)

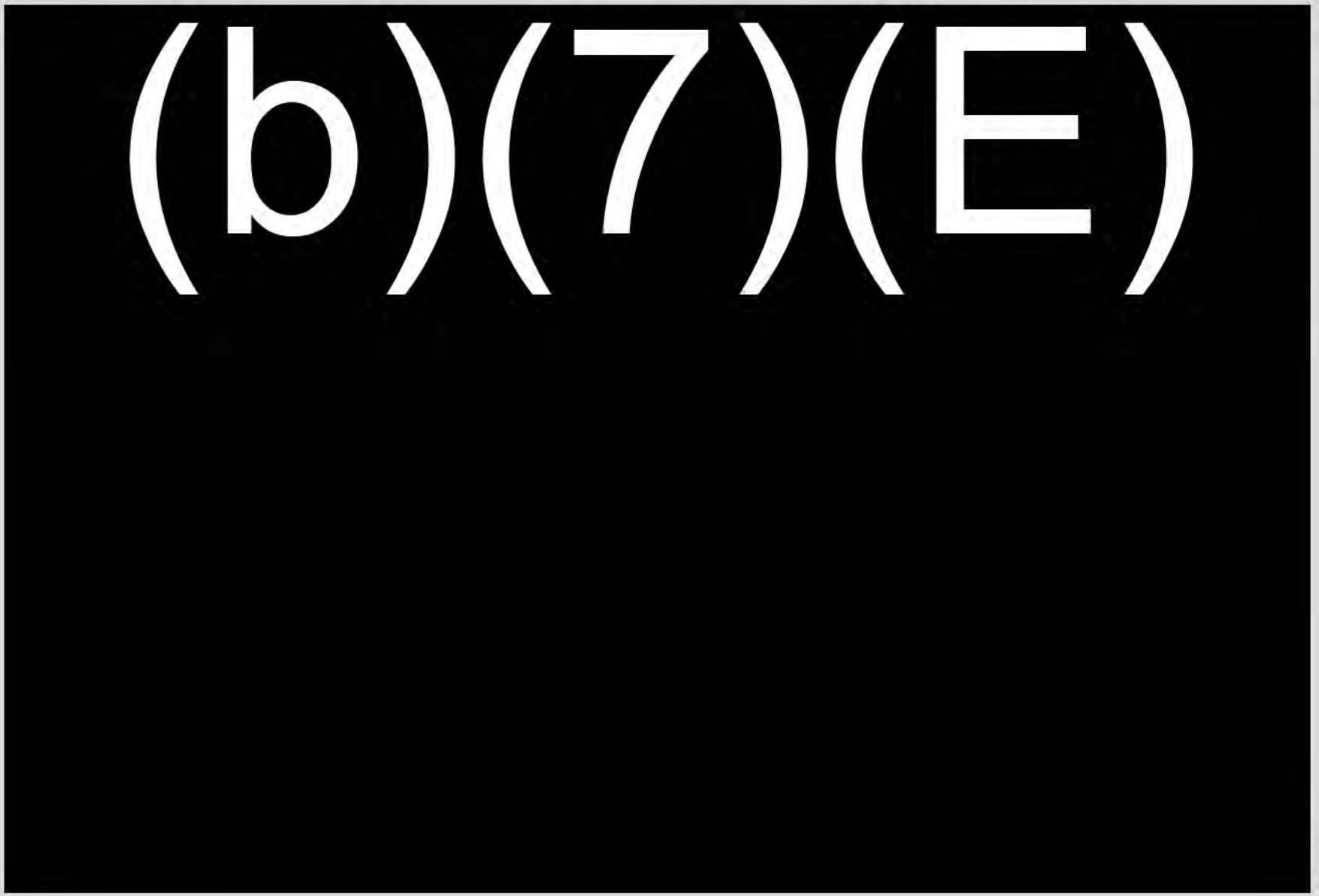
1 2 3 4

(b)(7)(E)

(b)(7)(E)

Process Traveler (b)(7)(E)

1 2 3 4



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Process Traveler (b)(7)(E)

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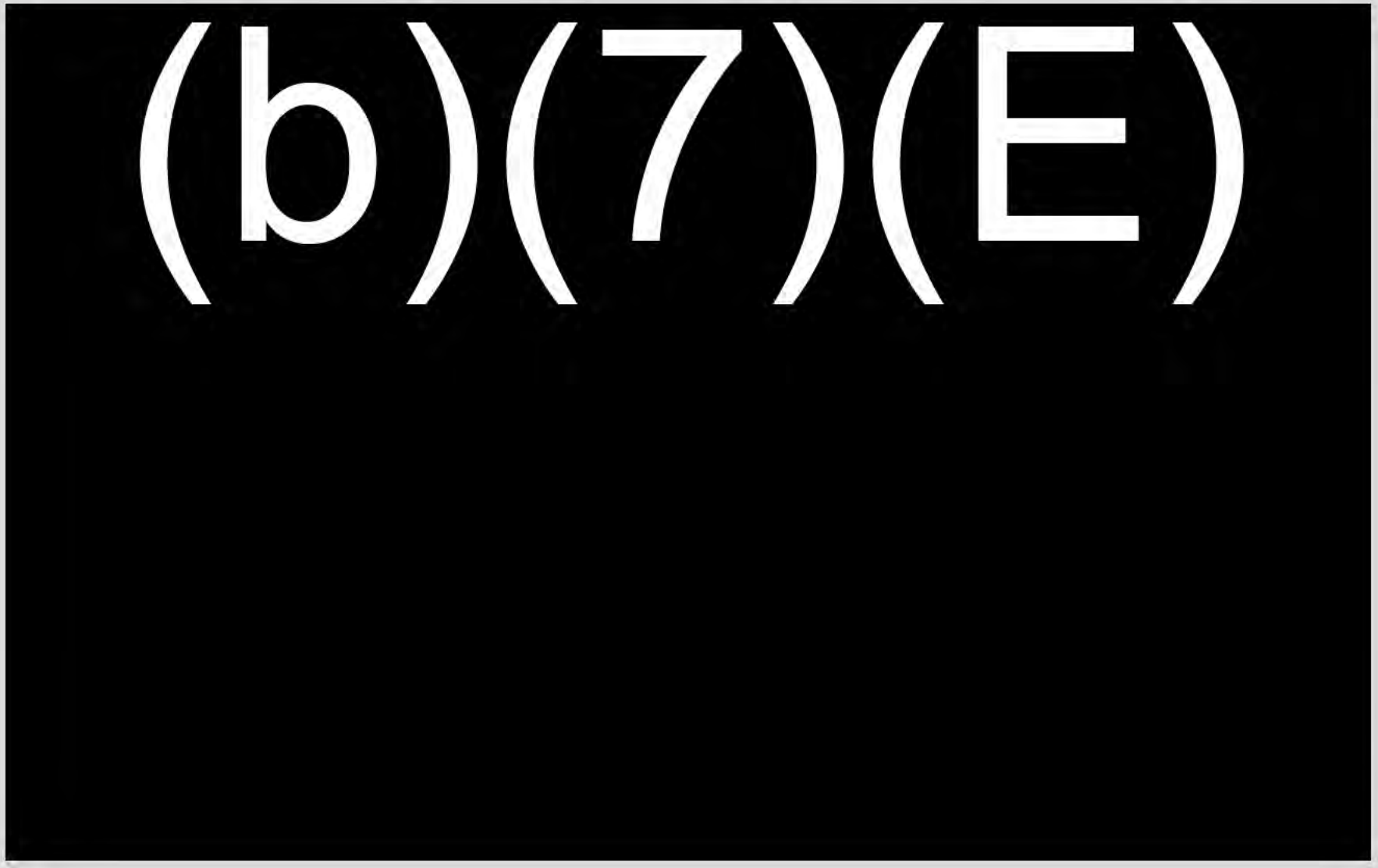
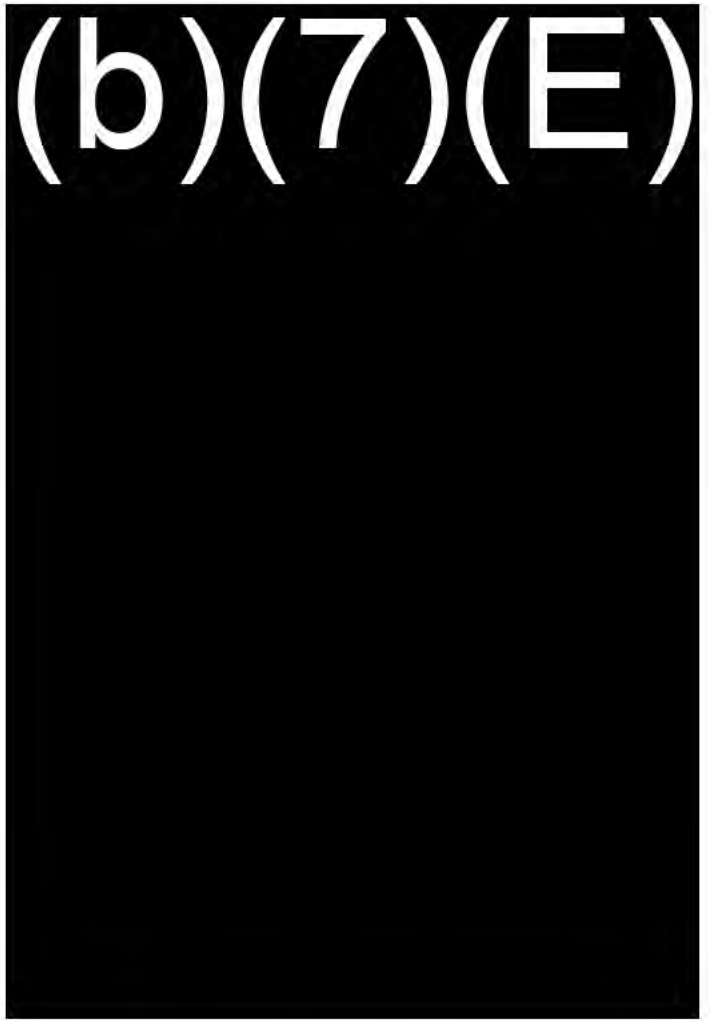
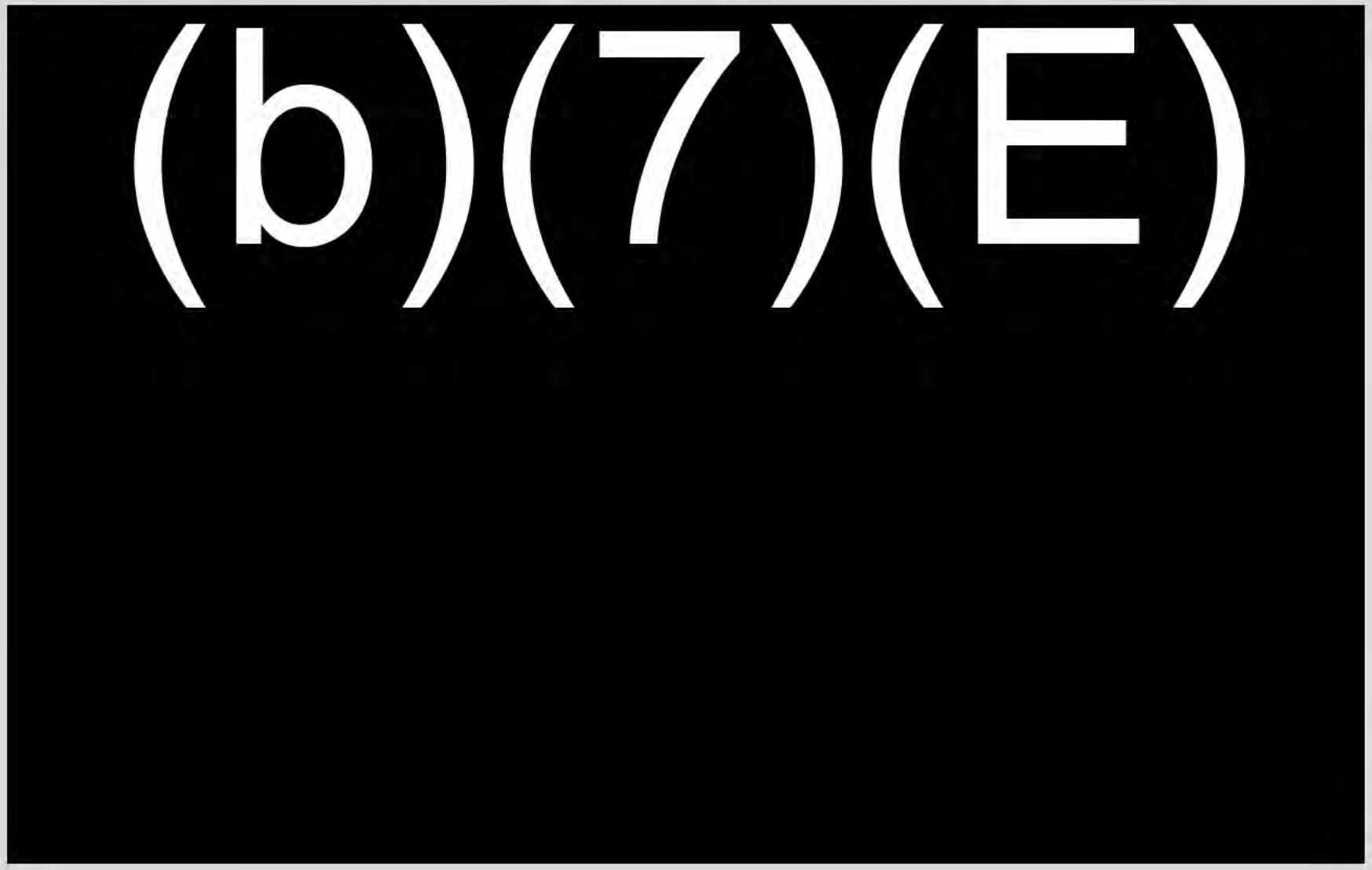


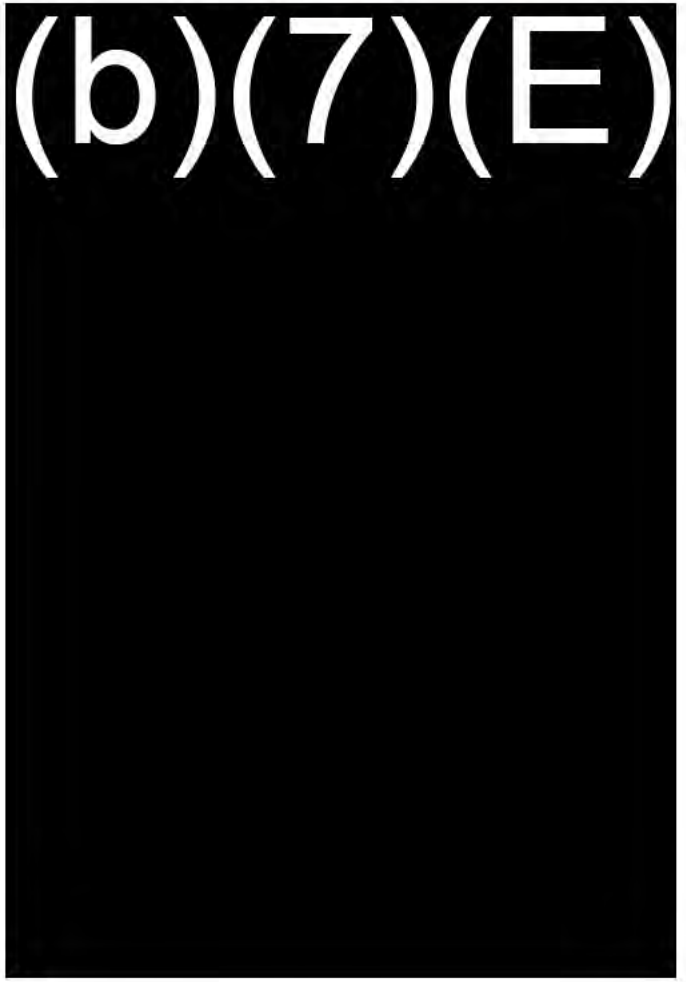


(b)(7)(E)

Process Traveler (b)(7)(E)

1 2 3 4

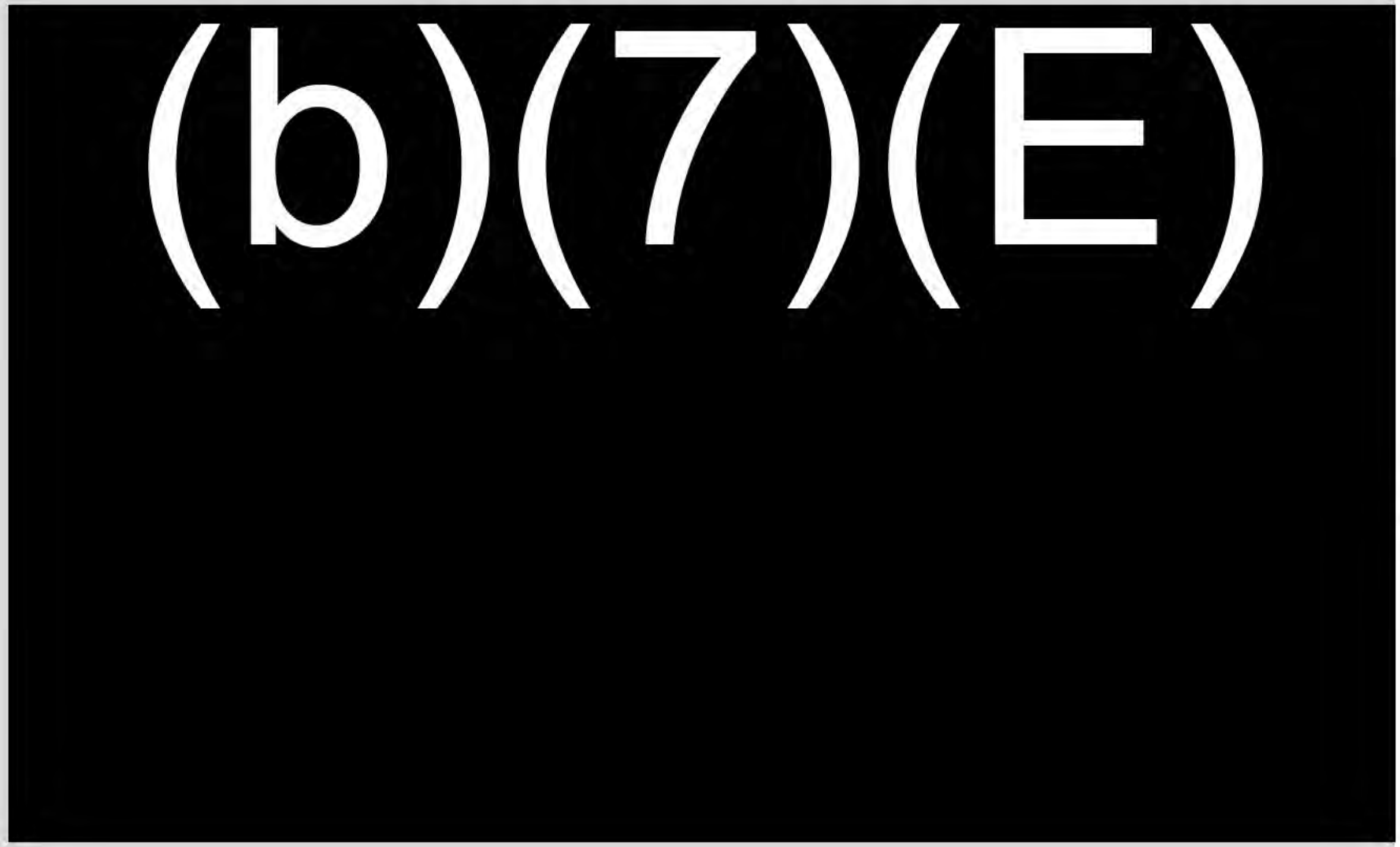


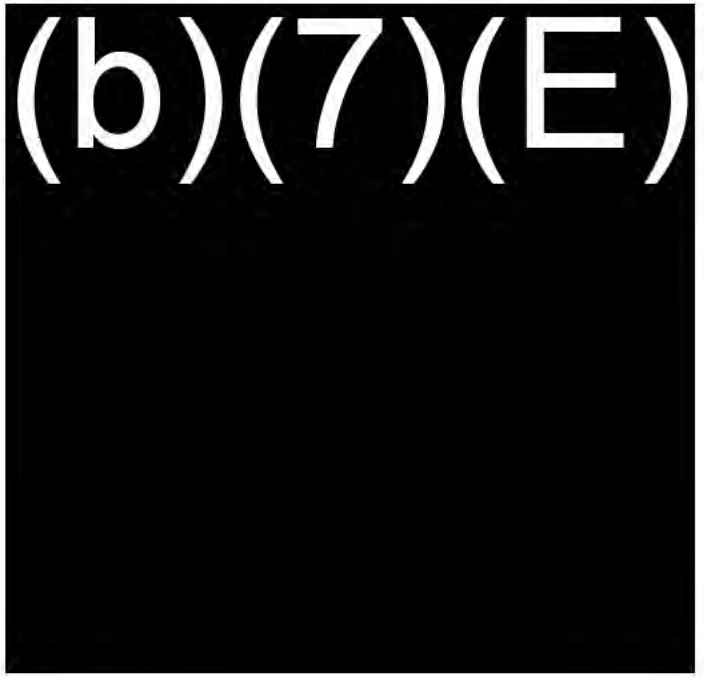


(b)(7)(E)

Process Traveler (b)(7)(E)

1 2 3 4





(b)(7)(E)

Process Traveler (b)(7)(E)

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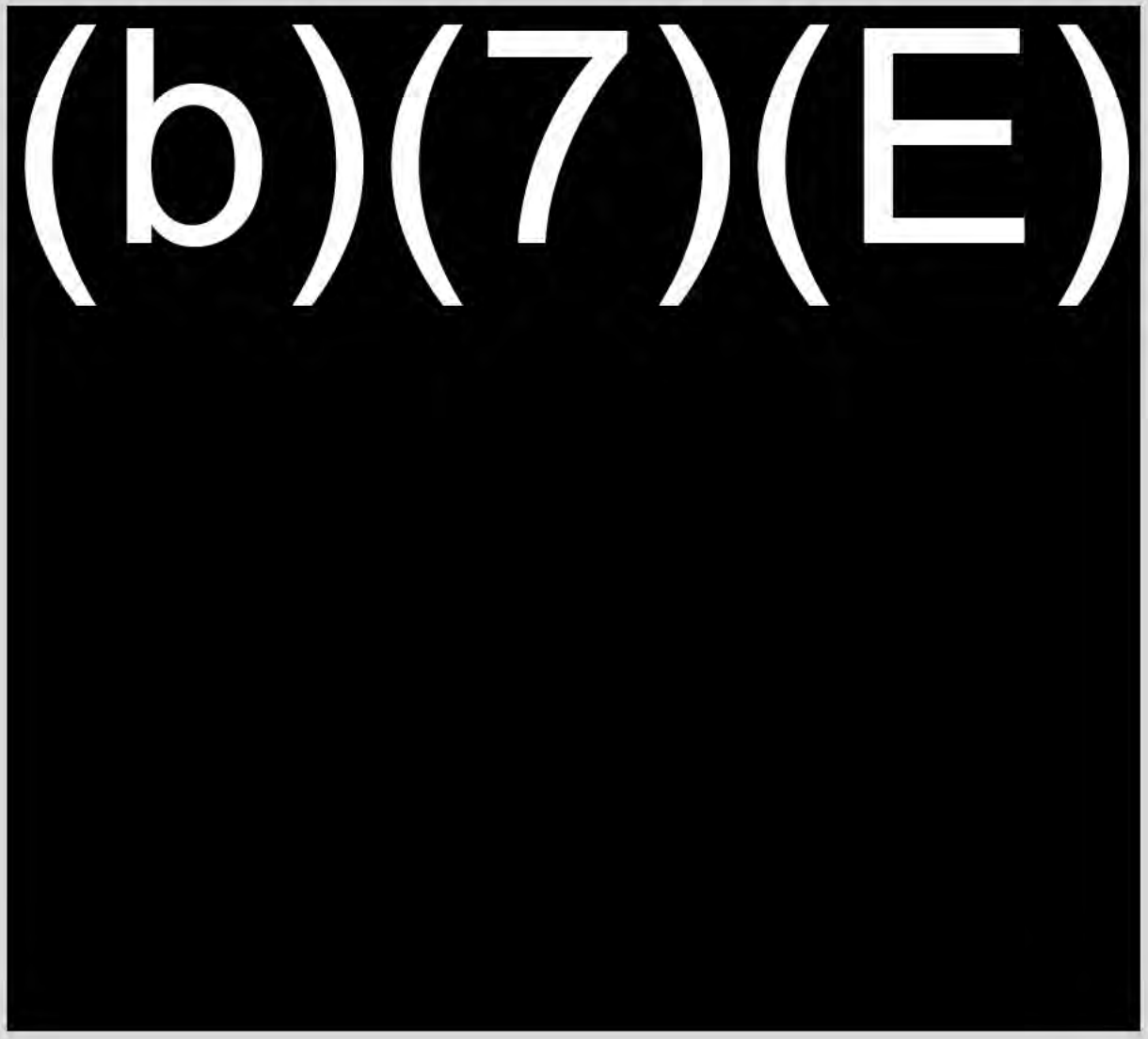

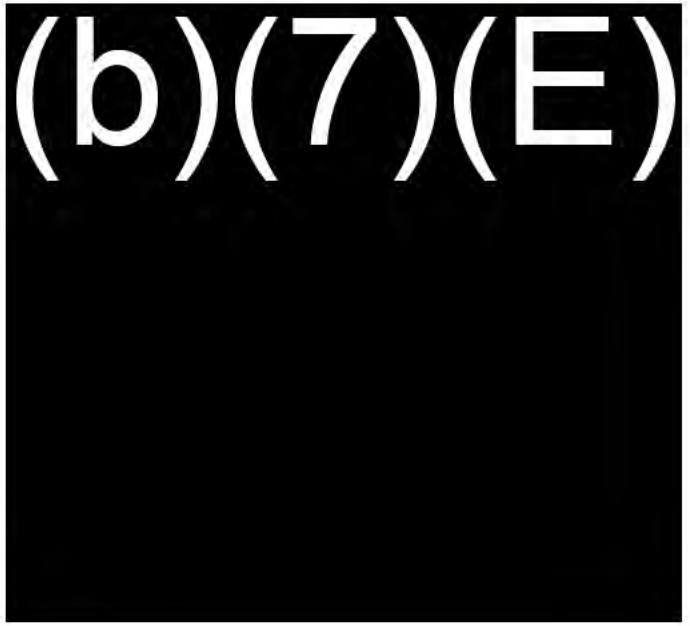

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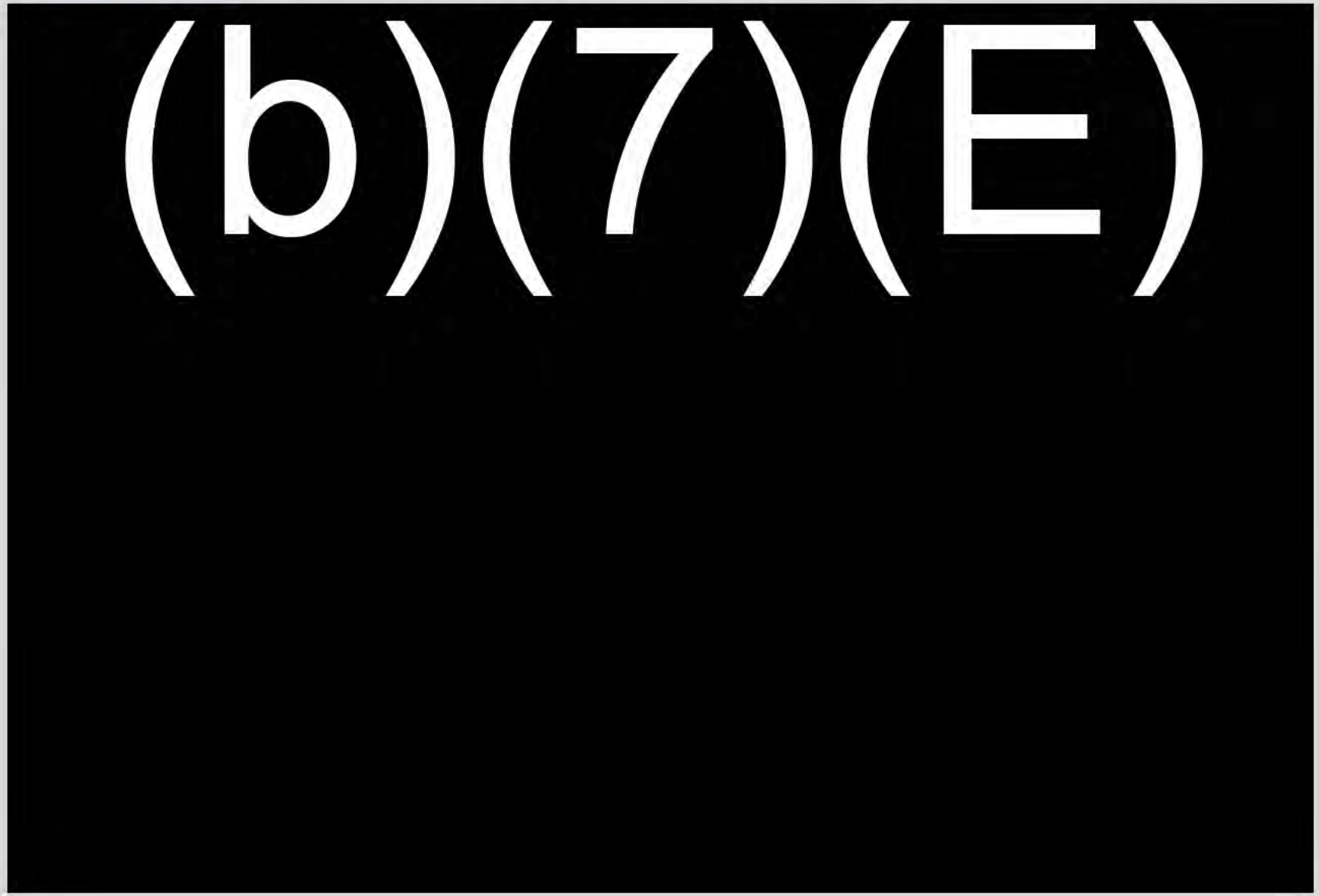
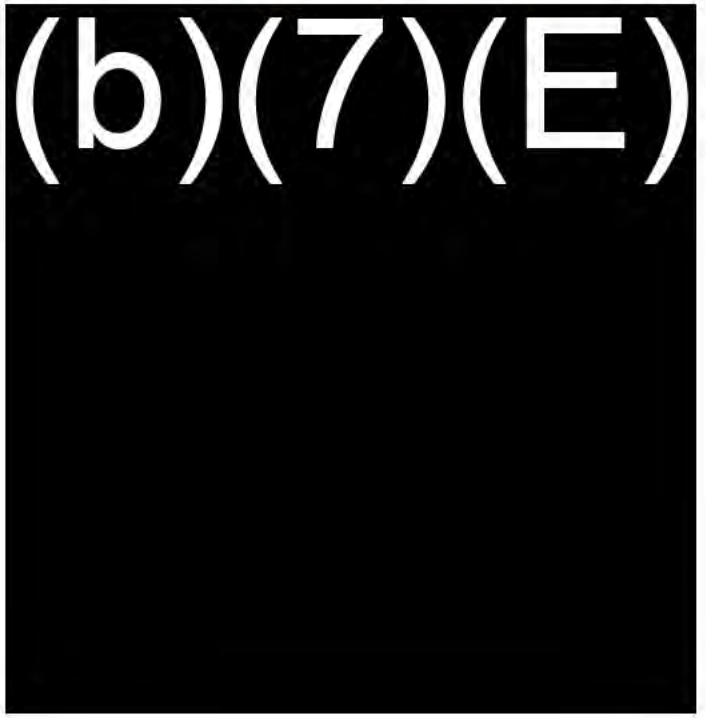
Process Traveler (b)(7)(E)

1 2 3 4





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Process Traveler (b)(7)(E)

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Process Traveler (b)(7)(E)

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Process Traveler (b)(7)(E)

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Process Traveler (b)(7)(E)

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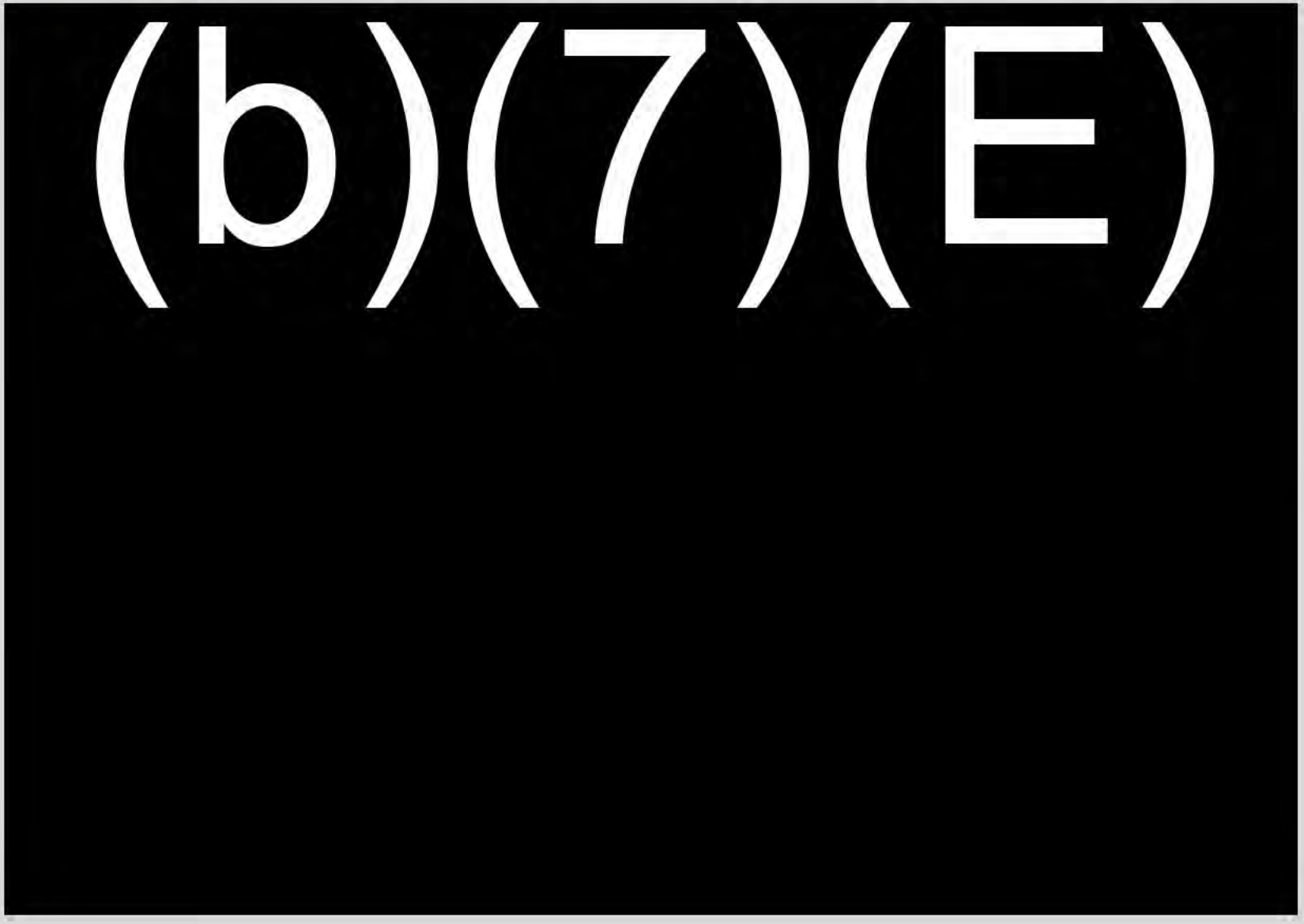

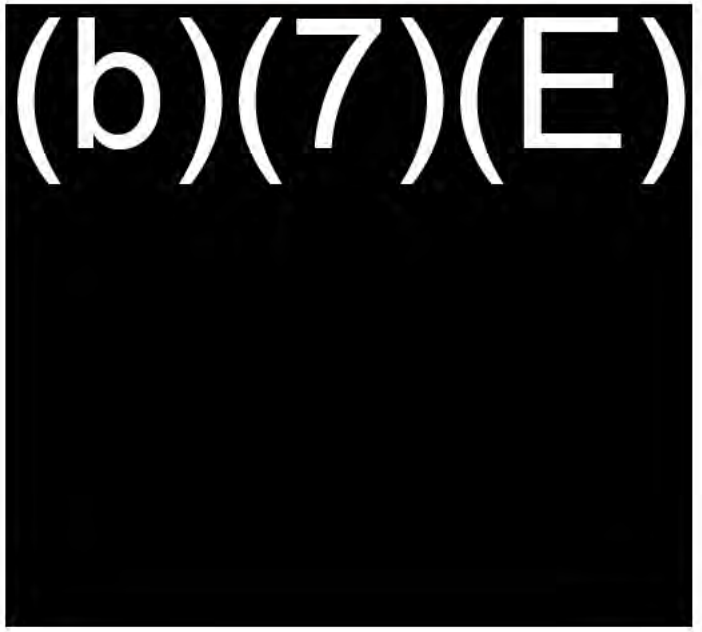

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Process Traveler (b)(7)(E)

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(b)(7)(E)

Process Traveler (b)(7)(E)

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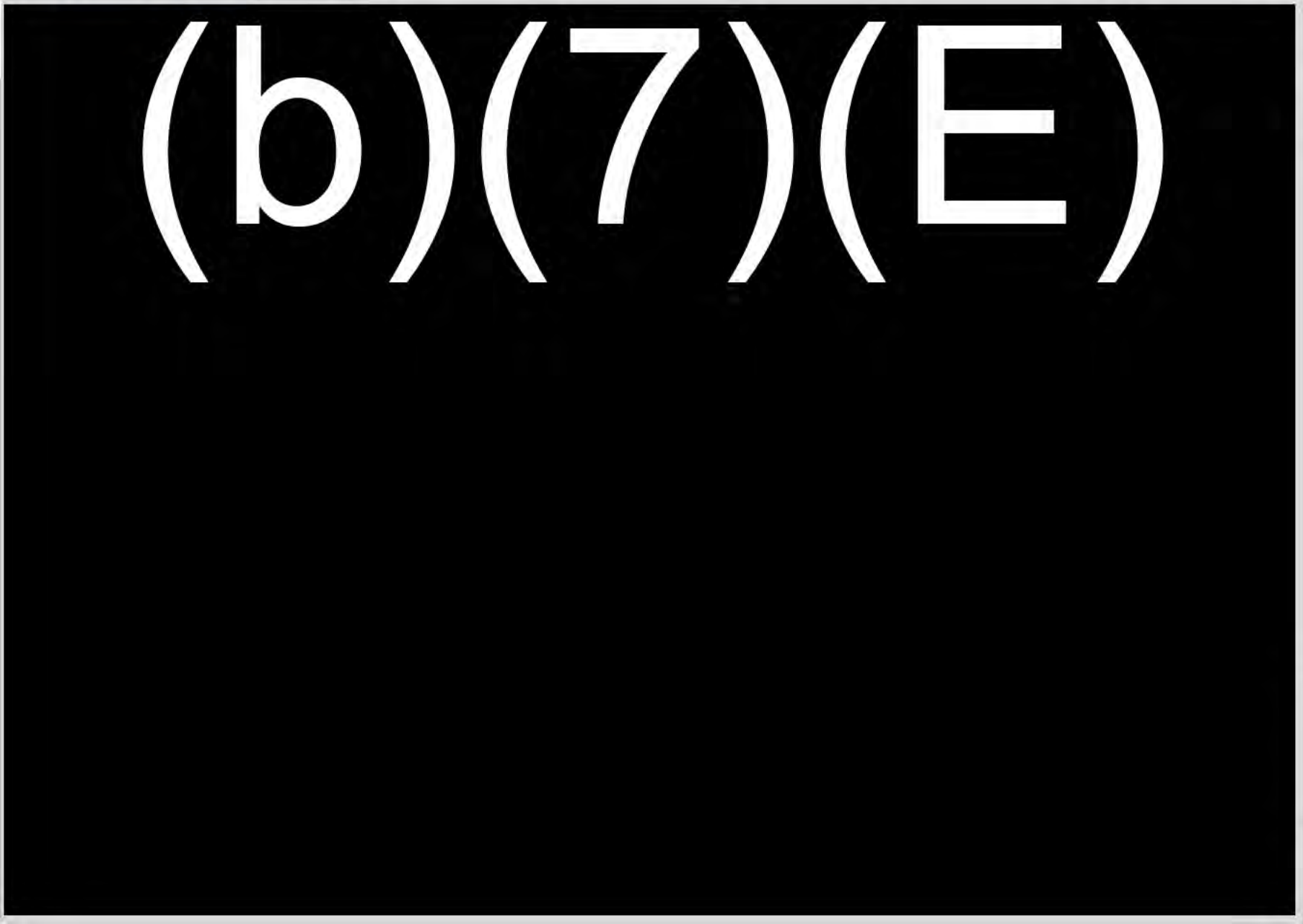

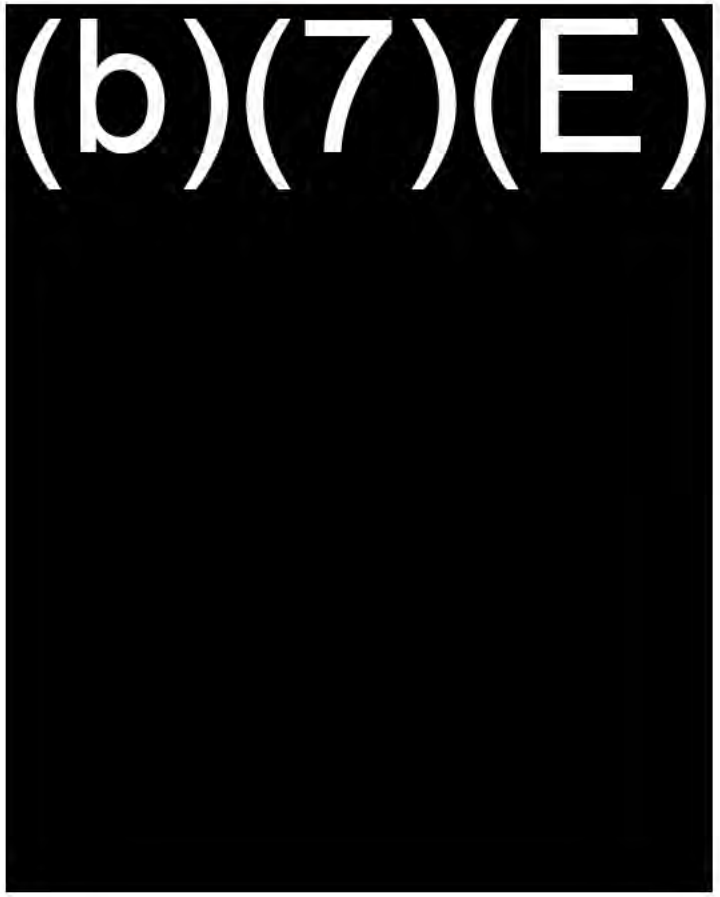

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Process Traveler (b)(7)(E)

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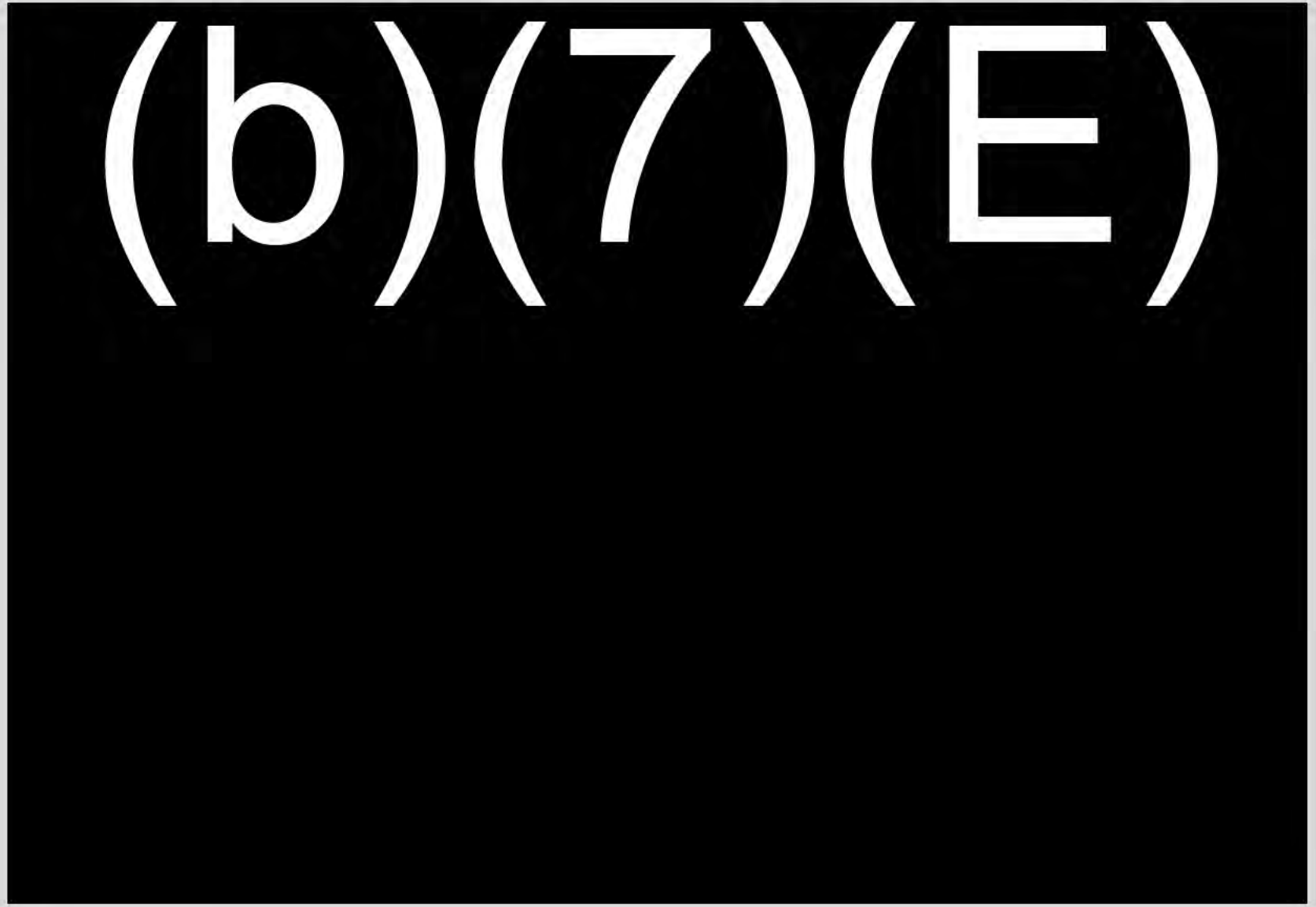

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Process Traveler (b)(7)(E)

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Process Traveler (b)(7)(E)

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Process Traveler (b)(7)(E)

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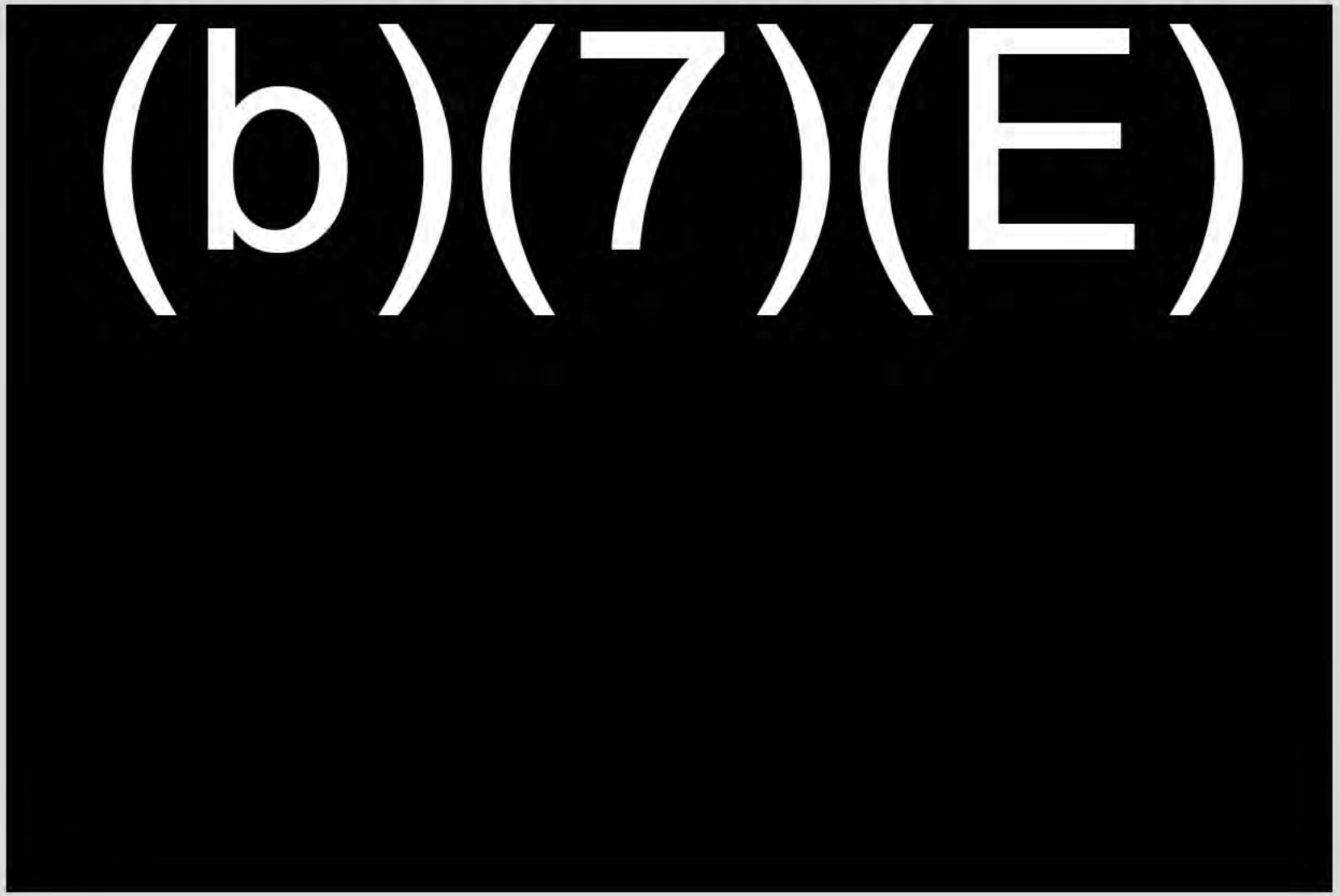

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Process Traveler (b)(7)(E)

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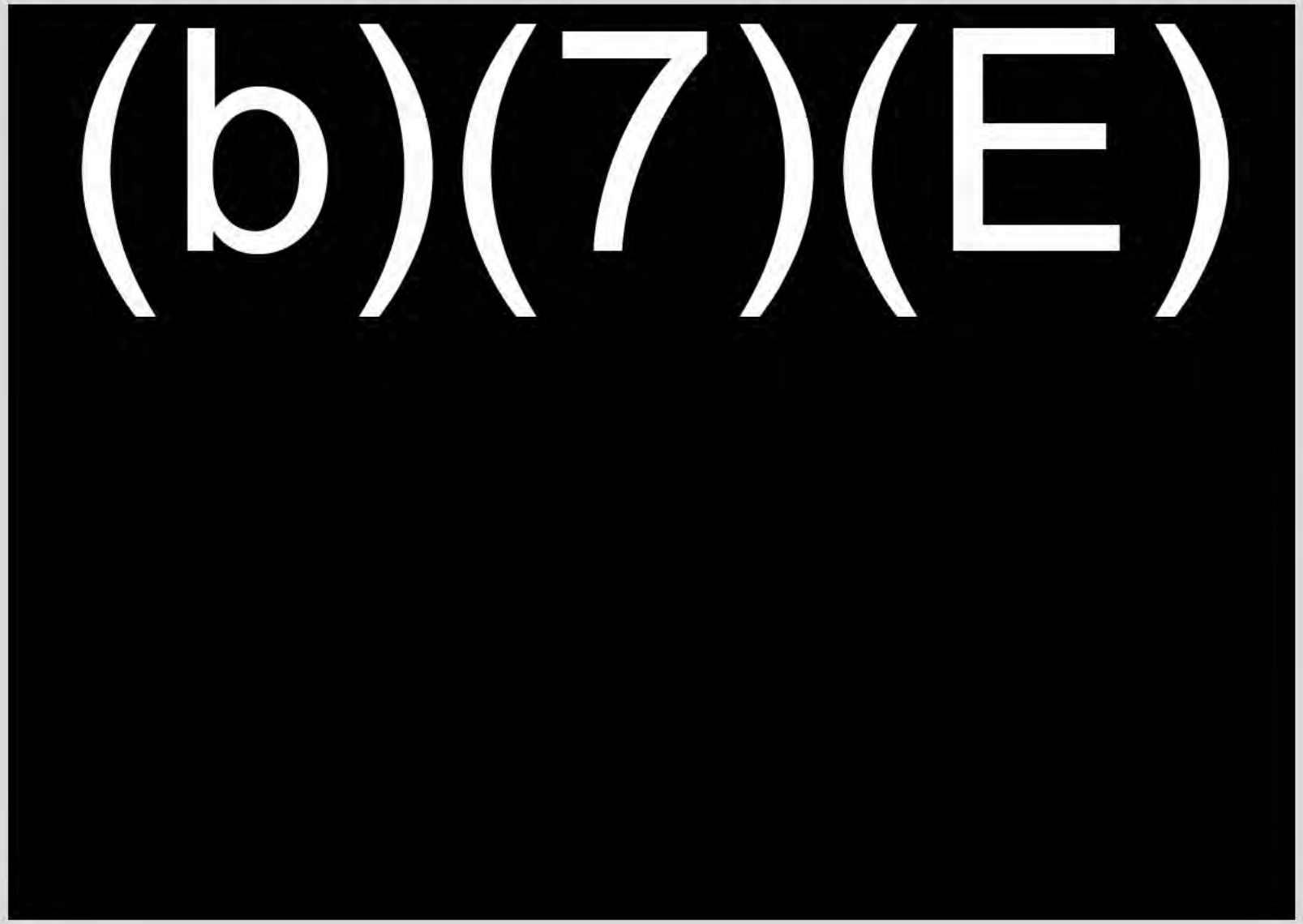
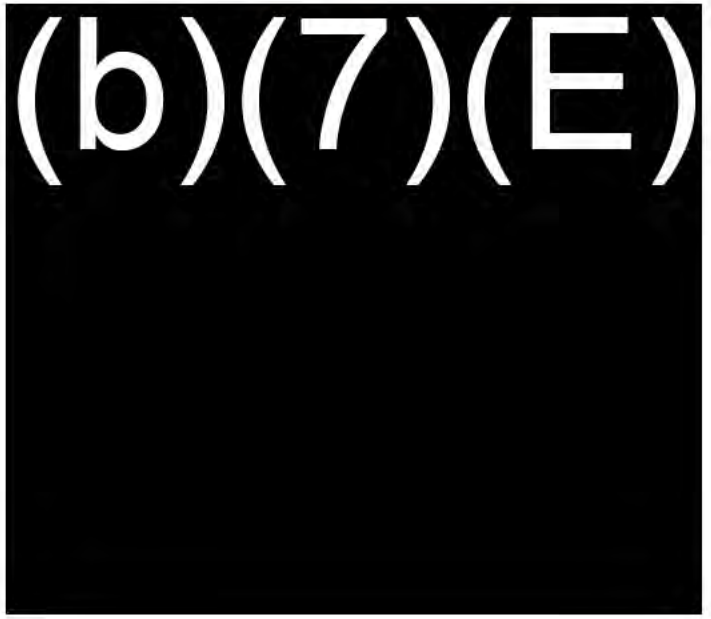




(b)(7)(E)

Logoff

(b)(7)(E)

(b)(7)(E)

(b)(7)(E)

How to Learn More

CBP relies on officers in the field to drive the successful rollout of facial comparison and other innovative technologies. This requires each officer to master the threat landscape at their port, understand how technology will improve enforcement, and provide relevant feedback to enable the continuous success of CBP operations.

Email (b)(7)(E) to submit suggestions, comments, or questions related to facial comparison technology and can expect to receive a response within 48 business hours.

Simplified Arrival is a ***tool*** that enables officers to focus on ***enforcement*** and ***threat detection***

Table of Contents – Appendix

(b) (6), (b) (7)(C)

APPENDIX

Troubleshooting and Optional Practices

Simplified Arrival is a ***tool*** that enables officers to focus on ***enforcement*** and ***threat detection***

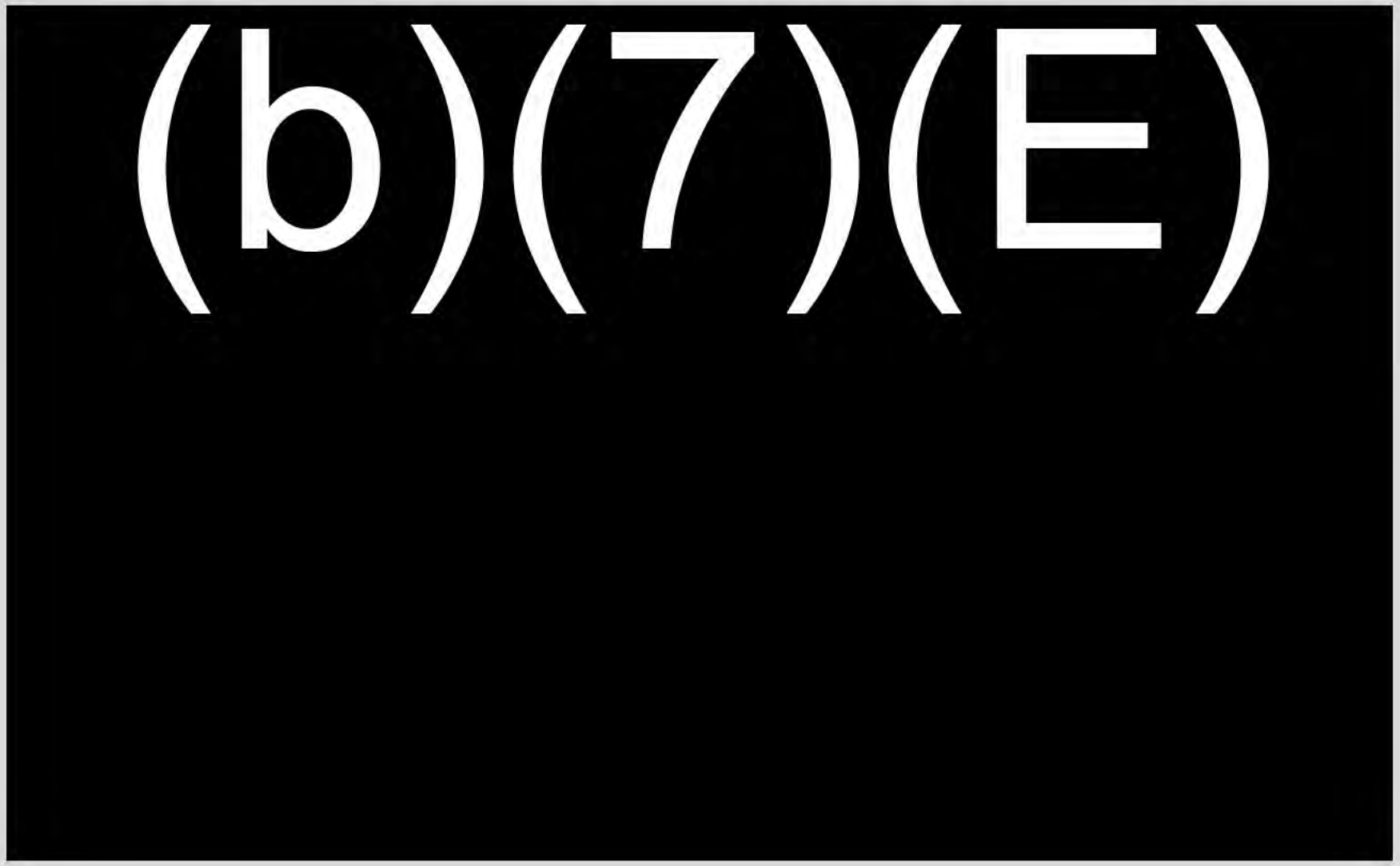
Troubleshooting: Accessing Help

(b)(7)(E)

(b)(7)(E)

(b)(7)(E)

Troubleshooting: Report a Problem



(b)(7)(E)

Troubleshooting: (b)(7)(E)

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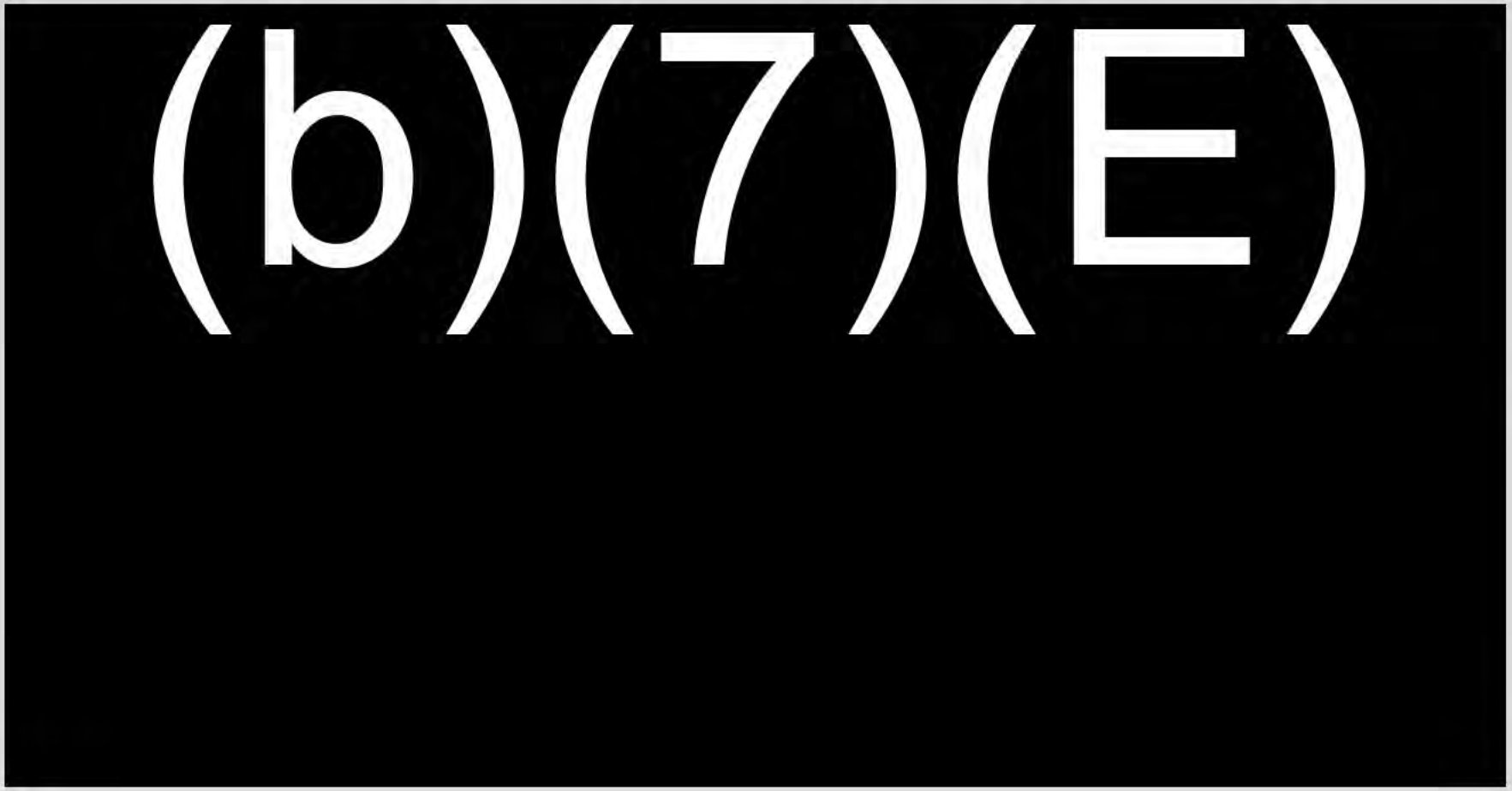

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(b)(7)(E)

(b)(7)(E)

Homeland Security

Sprint

Traveler Verification Service & Biometric Exit Mobile Application

June 2017

Biometric Exit

Introduction

Biometric Exit Introduction

Homeland Security

Biometric Exit Introduction - continued

How do the projects fit together?

Homeland Security

TVS

Operations

Traveler Verification Service (TVS) Overview

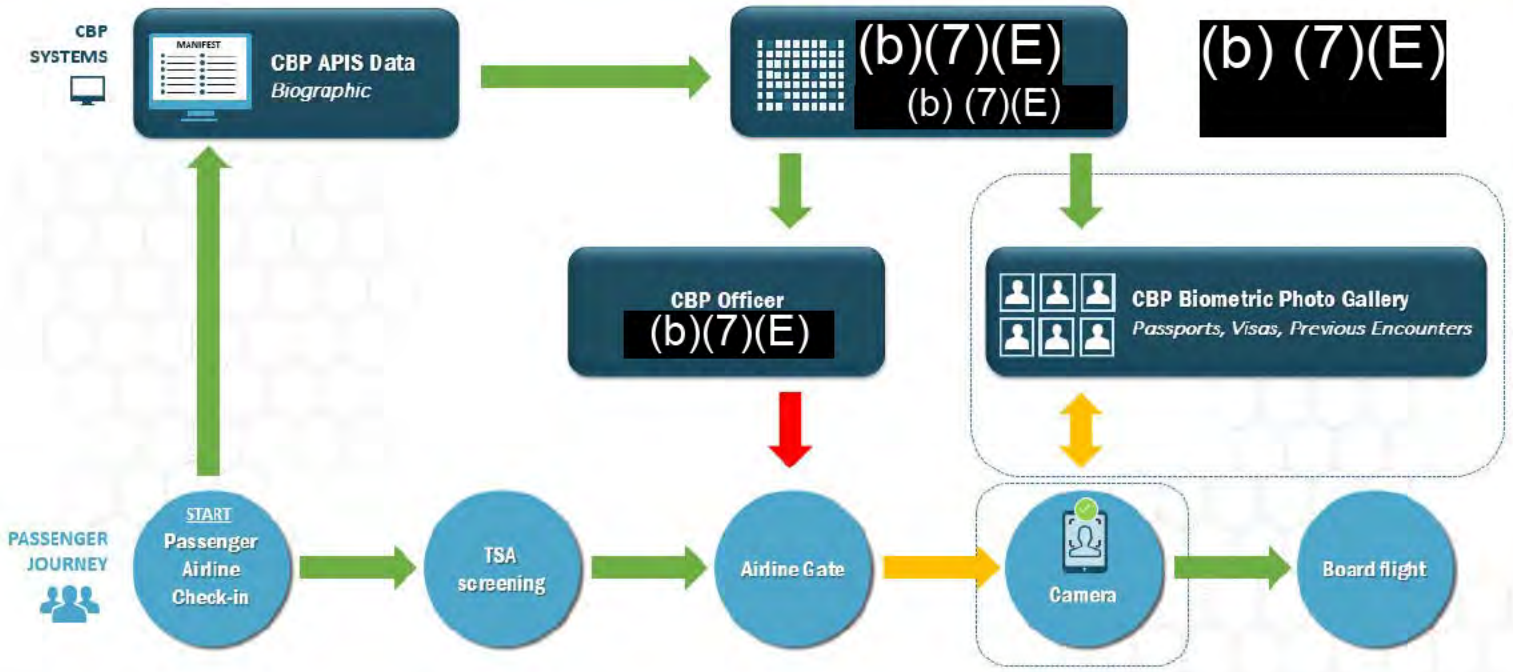
What is TVS?

TVS biometrically confirms traveler departure by using facial recognition.

TVS uses information already available to CBP. APIS data is used to create a gallery of photos on travelers on a particular flight. The photos come from government holdings, such as U.S. passport and visa photos, photos in (b)(7)(E) etc. The photo captured by TVS is then matched against the gallery to biometrically confirm identity on exit.

Homeland Security

TVS Overview - continued



Homeland Security

Step 1: Setup Camera

(b)(7)(E)

Step 1: Process Flight

Scan the Boarding Pass.

(b) (7)(E)

(b) (7)(E)

(b)(7)(E)

(b) (7)(E)

(b)(7)(E)
Press the Power Button to Turn the Camera Off.

(b)(7)(E)

TVS Camera Functions

Green Light = Match

Yellow Light = FR Quality Image not Captured. Try Again (2).

Blue Light = No Match!

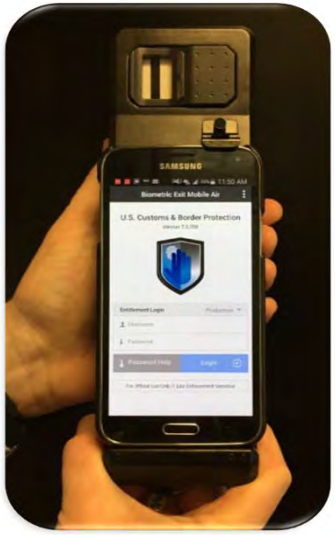
(b) (7)(E)

Homeland Security

TVS & BEMA

Operations

Biometric Exit Mobile Application (BEMA) Overview



- BEMA is a (b) (7)(E) application.
- BEMA provides real-time query results to CBP Officers in a mobile setting (b) (7)(E)
  - (b)(7)(E)
  - (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)
- With BEMA, a CBPO can confirm the departure of travelers by scanning their passports and capturing fingerprints.

[redacted]

Homeland Security

BEMA - TVS Mismatches

- TVS mismatches will show up on the BE-Mobile Device in (b) (7)(E)

(b)(7)(E)

(b)(7)(E)

- (b)(7)(E)
- (b)(7)(E)

BEMA - TVS / BEMA Referral (b) (7)(E)

- A referral (b) (7)(E)
  - (b)(7)(E)
  - (b)(7)(E)

(b)(7)(E)

BEMA - Acknowledging TVS Mismatch

(b)(7)(E)

- Once you select a mismatch, (b)(7)(E)

(b)(7)(E)

(b)(7)(E)

- (b)(7)(E)

(b)(7)(E) the BEMA user will begin the adjudication process for that specific referral.

(b)(7)(E)

BEMA - Processing the TVS Mismatch

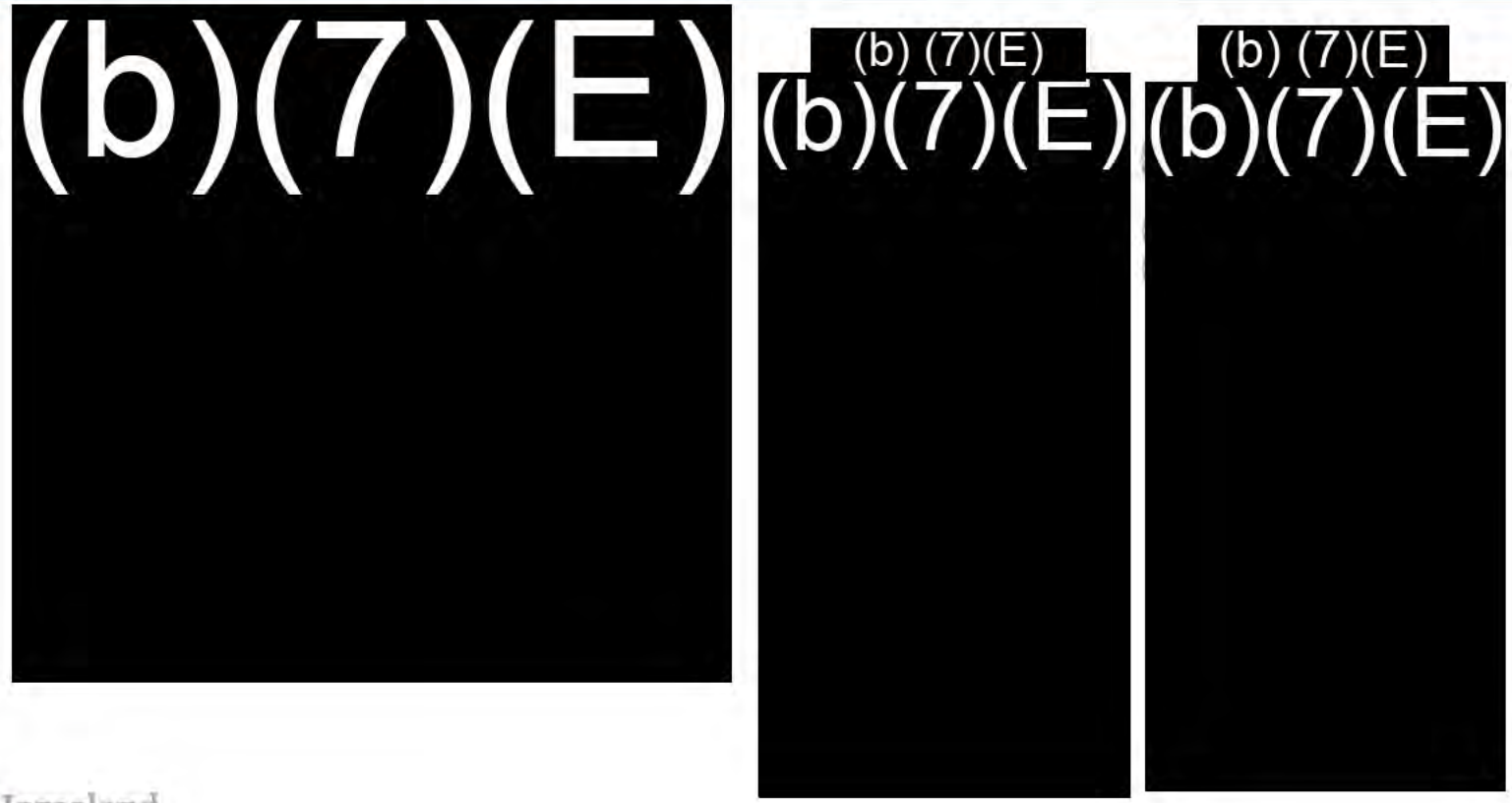
(b)(7)(E)

(b)(7)(E)

- After selecting the (b)(7)(E) (b)(7)(E) the BEMA user can begin adjudicating the mismatch using normal BEMA.
- At this point, you should only process the referred/mismatched traveler.
- (b)(7)(E)

Homeland Security

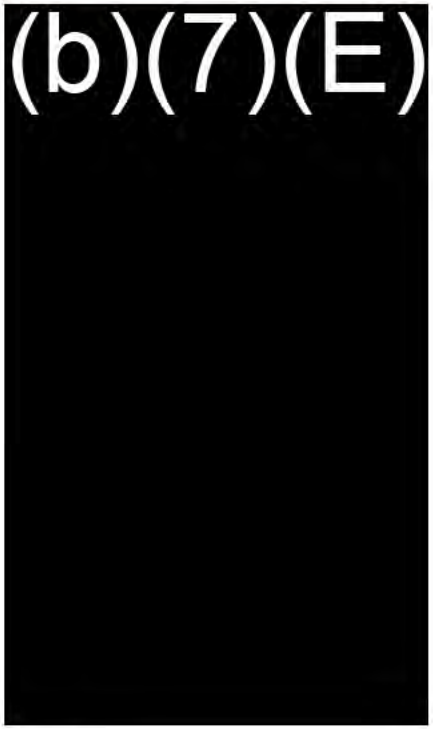
BEMA - Processing a Passenger



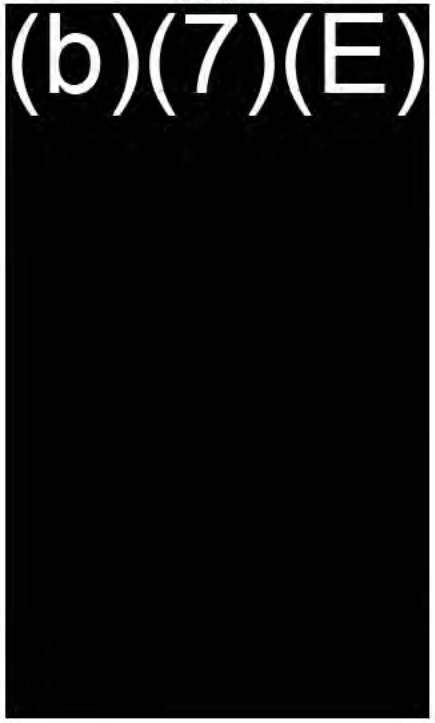
Homeland Security

BEMA - Biometric Capture

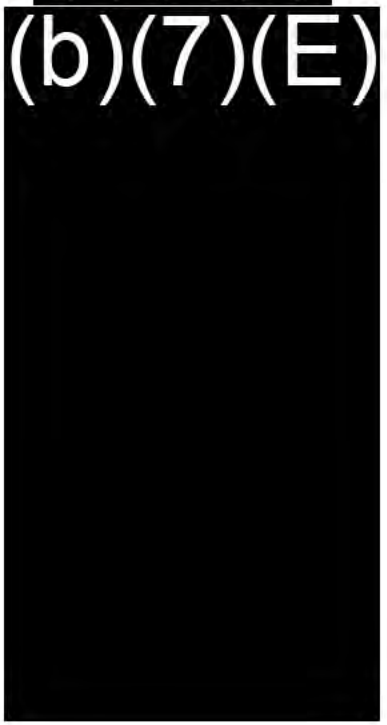
Fingerprint Capture



Fingerprint Capture Results



(b) (7)(E)



Homeland Security

BEMA - (b) (7)(E)

(b) (7)(E)

(b)(7)(E)

Homeland Security

BEMA - (b) (7)(E)

(b)(7)(E)

(b) (7)(E)

- (b)(7)(E)
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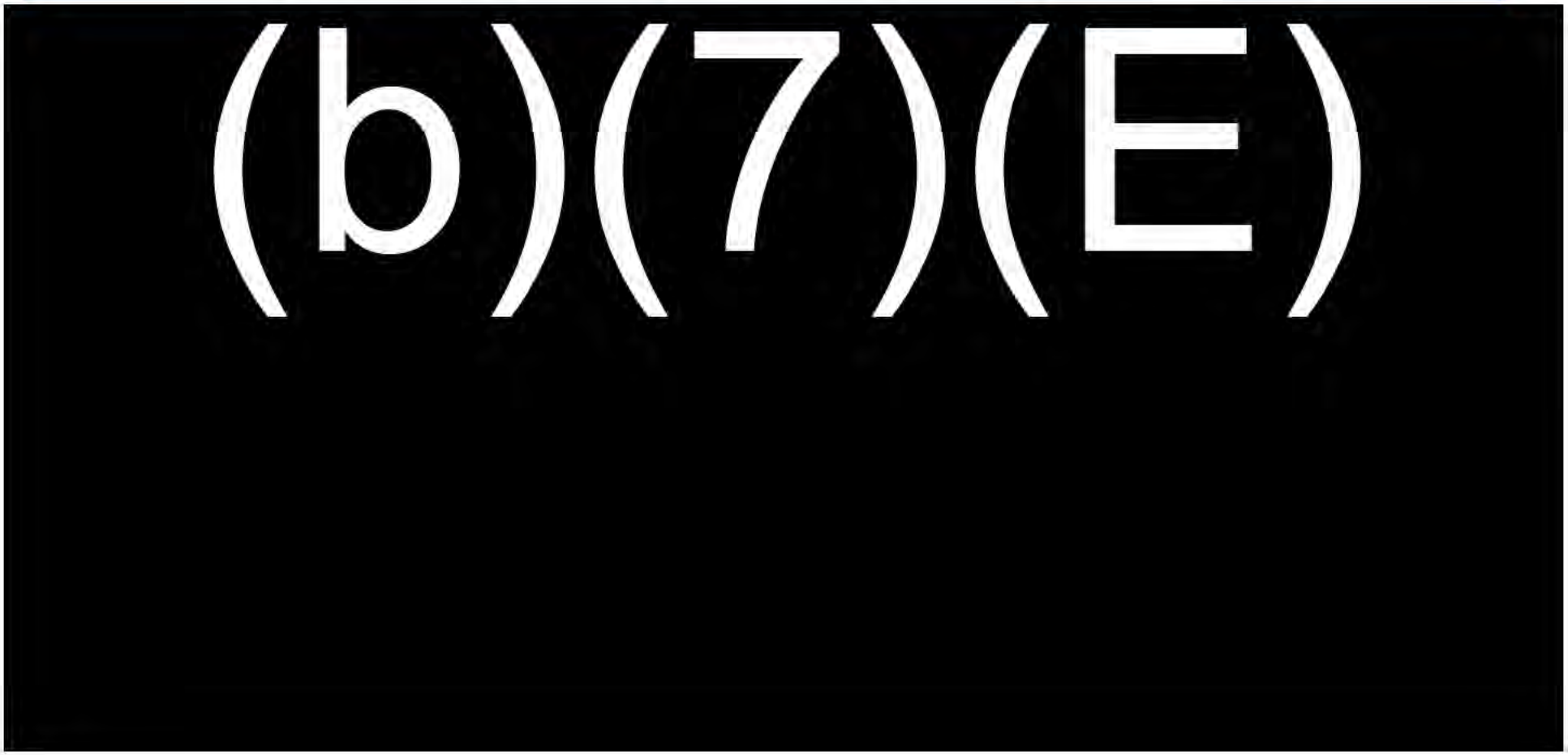
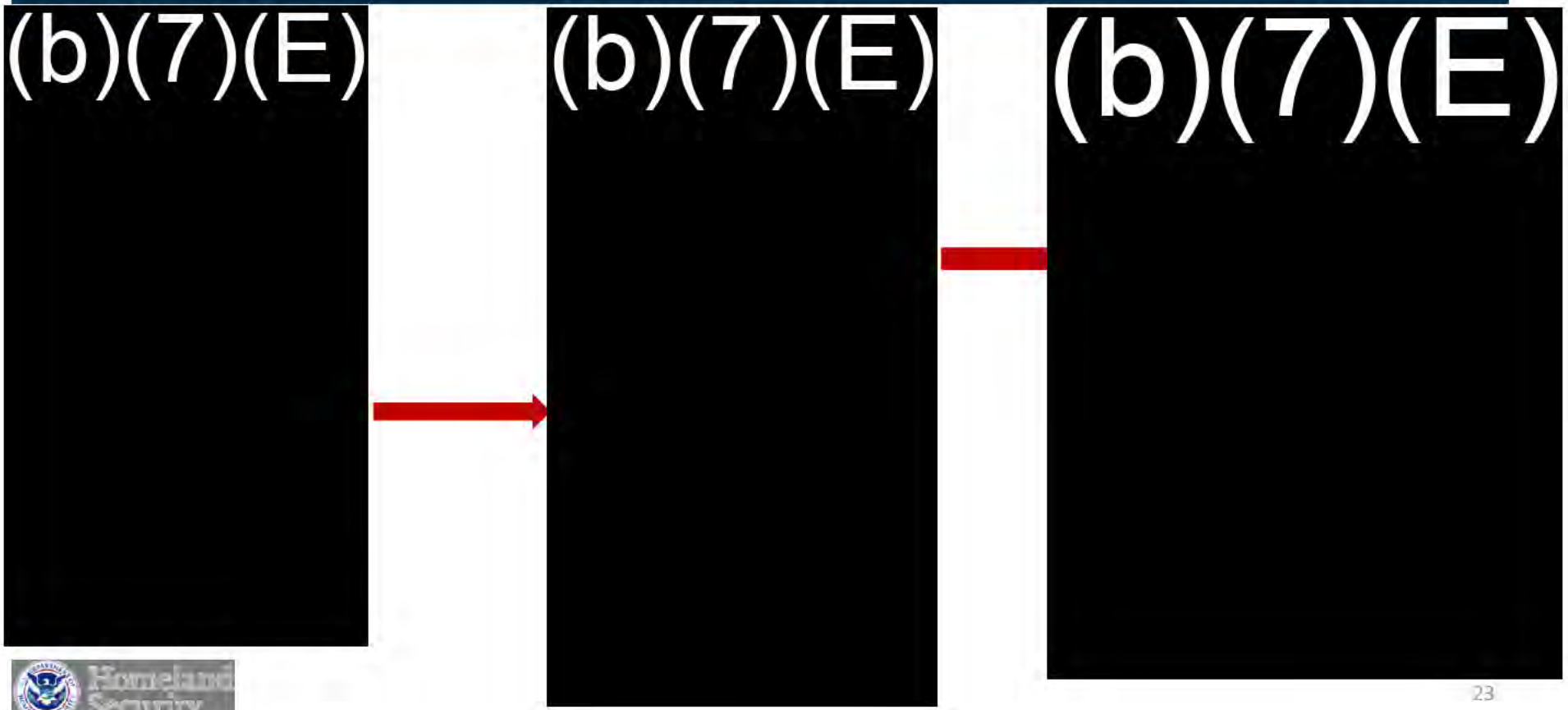
(b)(7)(E)



BEMA Notifications (b) (7)(E)



Homeland Security

(b)(7)(E)

(b)(7)(E)

Policy & Exceptions

Policy

TVS allows the CBPO operating the device to determine the appropriate response to those travelers that do not match.

- All passengers identities, including those of USCs, must be verified. In the case of USCs, absent any law enforcement concern, a cursory review of the U.S. passport can suffice for verification.
- If the identity of a traveler cannot be verified by TVS, the CBP Officer will use appropriate alternative methods, such as BEMA or a manual review of documents, to verify that traveler's identity.
- Once the traveler's identity is verified and there are no enforcement concerns, the CBP Officer may allow the traveler to board the flight.
- [redacted] (b) (7)(E)

Policy – EWI (b) (7)(E)

(b)(7)(E)

Policy – EWI (b) (7)(E) (continued)

(b)(7)(E)

Policy – EWI (b) (7)(E) (continued)

(b) (7)(E)

(b)(7)(E)

Exceptions

If the passenger is . . .	And . . .	then
a USC	Is a no-match	Manually exam the document to ensure the documents are valid and that the traveler is the true bearer.
a non-USC and in scope for biometrics	Is a no-match	Use BEMA to verify identity.
a USC	Refuses to participate	Provide the traveler with a tear sheet, which explains the operation and refer the traveler to the CBP Officer. The officer will conduct an examination of travel documents to ensure the documents are valid and that the traveler is the true bearer.
a non-USC and in scope for biometrics	Refuses to participate	Inform the traveler that participation is mandatory for everyone. Provide the traveler with a tear sheet, which explains the operation. If the traveler still refuses to participate, use BEMA to verify identity.

Exceptions - continued

If the passenger is . . .	And . . .	then
Over the age of 14 and under the age of 79		The CBPO may excuse the passenger from TVS.
Is unable to present to TVS and is over the age of 14 and under the age of 79	Cannot get a quality photo (i.e. a green light)	On foreign nationals, use BEMA to verify identity. (b)(7)(E) (b)(7)(E) (b)(7)(E) For USCs, Manually exam the document to ensure the documents are valid and that the traveler is the true bearer.

(b)(7)(E)

Sprint

Training Summary

Sprint Training Summary

- Fulfill the mission requirement of Biometric Exit using two tools: **TVS and BEMA.**
  - **TVS** automates facial recognition of travelers on exit.
    - Uses APIS manifest data and existing photos to match live photos of travelers boarding.
  - **BEMA** for exception processing.
    - BEMA is a (b) (7)(E) program that receives (b) (7)(E) fingerprints, swipe and (b) (7)(E) nd (b) (7)(E) s
- Used together, TVS and BEMA provide the foundation for robust biometric exit capabilities.

TVS

Reference Information

Authorities and References

- The 1996 Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA, Public Law No. 104-208) called for the creation of an automated system to record arrivals and departures of non-citizens at all air, sea, and land ports of entry. The 2002 Enhanced Border Security and Visa Entry Reform Act (EBSVERA, Public Law No. 107-173), the Intelligence Reform and Terrorism Prevention Act of 2004 (IRTPA, Public Law No. 108-458), and the Implementing Recommendations of the 9/11 Commission Act of 2007 (Public Law No. 110-53) all called for the creation of a nationwide, biometric entry/exit system.

Authorities and References

- **Follow US VISIT rules when using BE-Mobile:**
- Authority to collect biometric information (fingerprints) from in-scope travelers is under **8 CFR 215**.
- Determining in-scope status:
  - **In-scope status** is defined under **8 CFR 235.1(f)(1)(ii) to (iv) for entry and 8 CFR 215.8(a)(2)(i) to (iv) for exit.** Same as US VISIT criteria.
  - The BE-Mobile application will determine "in-scope" status as **any alien** whose travel document indicates that they are **between the age of 14 and 79 and not a United States or Canadian citizen**.
  - It is up to CBPOs to question travelers to determine if a passenger is a dual citizen or was admitted under any of the following visa types, which are exempt: A-1, A-2, C-3 (except for attendants, servants, or personal employees of accredited officials), G-1, G-2, G-3, G-4, NATO-1, NATO-2, NATO-3, NATO-4, NATO-5, or NATO-6.

System URLs, Usernames & Passwords

- (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)
- Password Change - (b)(7)(E)
- (b)(7)(E)
- Local Admin Account: (b)(7)(E)
- Local Admin Account Password: (b)(7)(E)

Homeland Security

Points of Contact

Sprint Project Manager

(b)(6) (b)(7)(C)
(b)(6) (b)(7)(C)
(b)(6) (b)(7)(C)

Sprint Implementation Support

(b)(6) (b)(7)(C)
(b)(6) (b)(7)(C)
(b)(6) (b)(7)(C)

BE-Mobile Project Manager

(b)(6) (b)(7)(C)
(b)(6) (b)(7)(C)
(b)(6) (b)(7)(C)

BE-Mobile Mailbox

(b)(7)(E)

CBP Mobile Website

(b)(7)(E)
- (b) (7)(E)
(b) (7)(E)

Questions?

U.S. Customs & Border Protection
Office of Information and Technology
Passenger Systems Program Directorate

TPAC Facial Pilot

Practice Scenarios

FIELD GUIDE

TRAEN Code: (b)(7)(E)

Version 5.0 – October 2018

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(b)(7)(E)

Scenario 4: Process a non-USC with no prints on file

(b)(7)(E)

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(b)(7)(E)

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(b)(7)(E)

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(b)(7)(E)

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(b)(7)(E)

(b)(7)(E)

Scenario 10: Process a USC who refuses to have photo captured

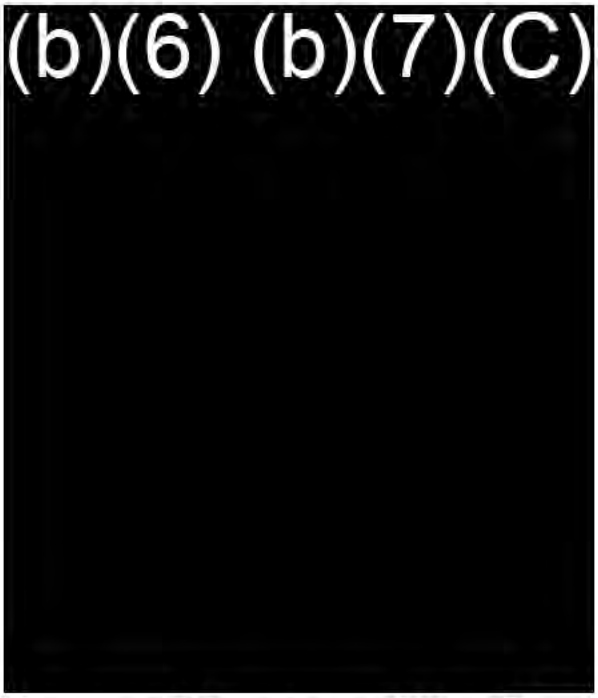
(b)(7)(E)

TPAC Facial Pilot Personas

Trainer 1

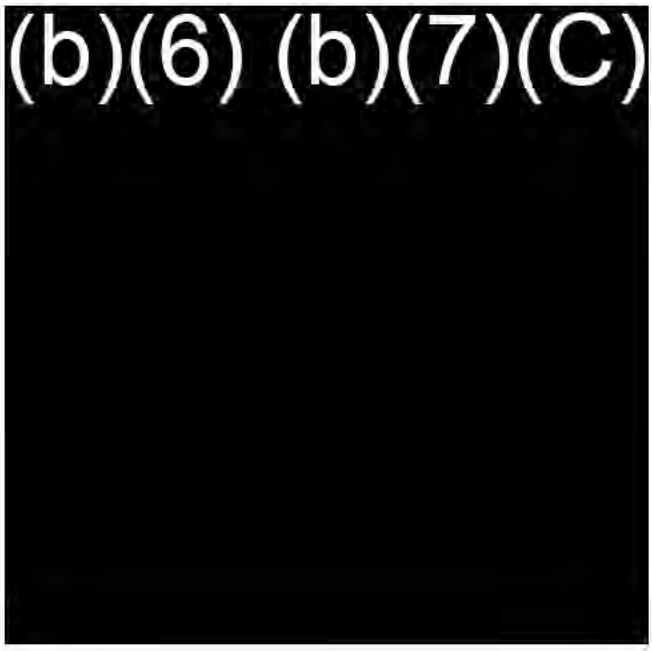
Scenario 1 Personas: US citizen (USC)

(b)(6) (b)(7)(C)



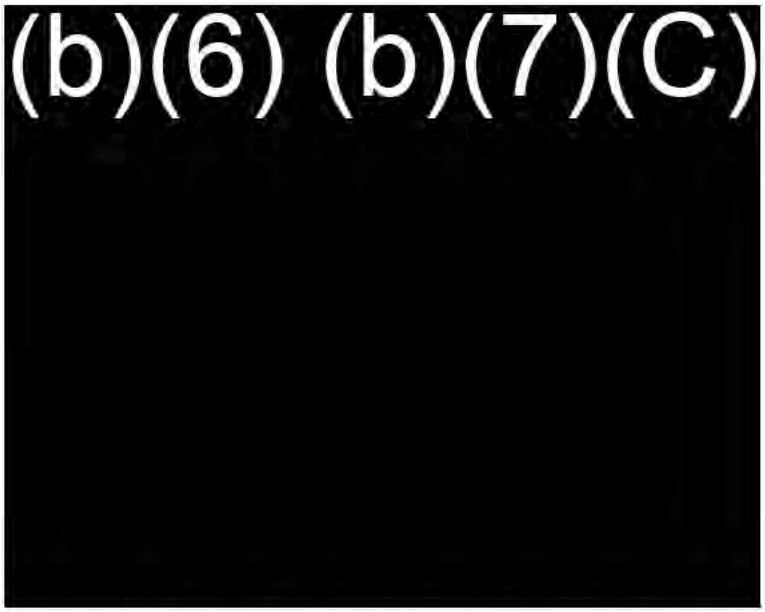
Scenario 2 Personas: USC with (b)(7)(E)

(b)(6) (b)(7)(C)



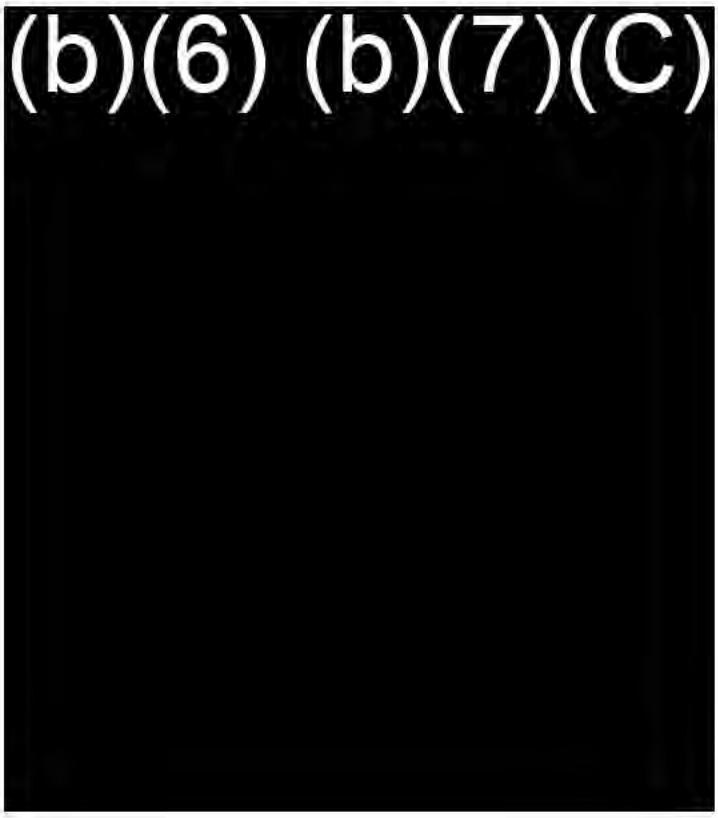
Scenario 3: Non-USC with prints on file

(b)(6) (b)(7)(C)



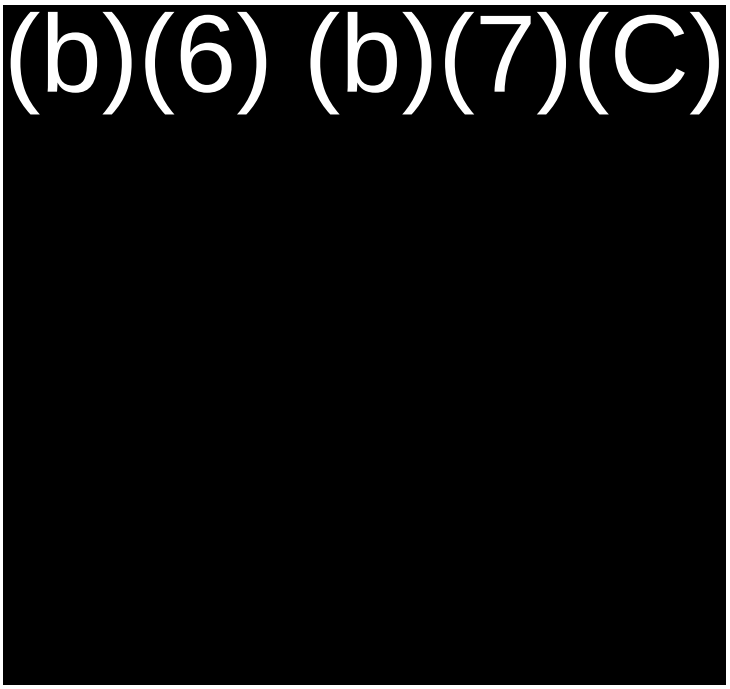
Scenario 4: Non-USC with no prints on file

(b)(6) (b)(7)(C)



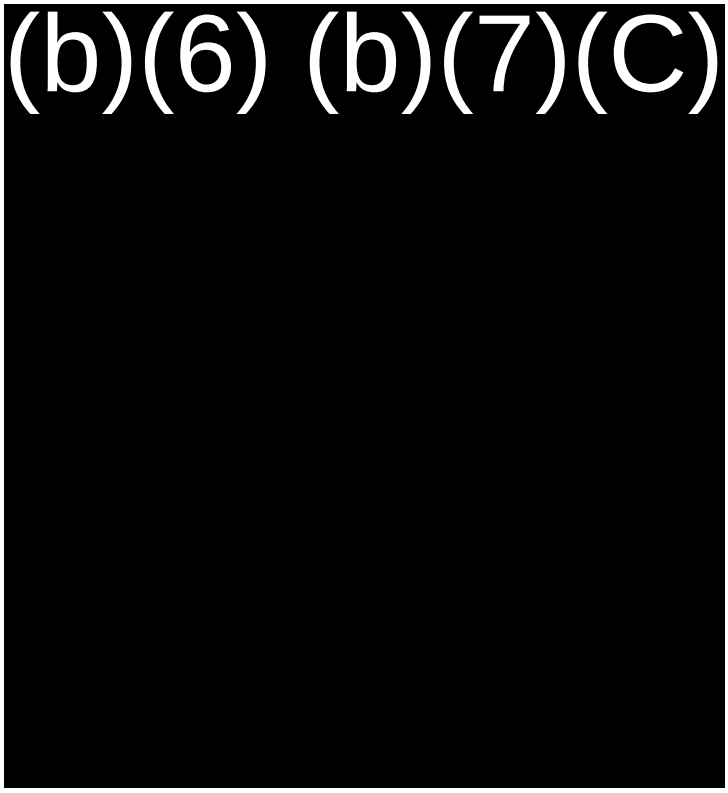
Scenario 5 Personas: USC who was previously confirmed

(b)(6) (b)(7)(C)

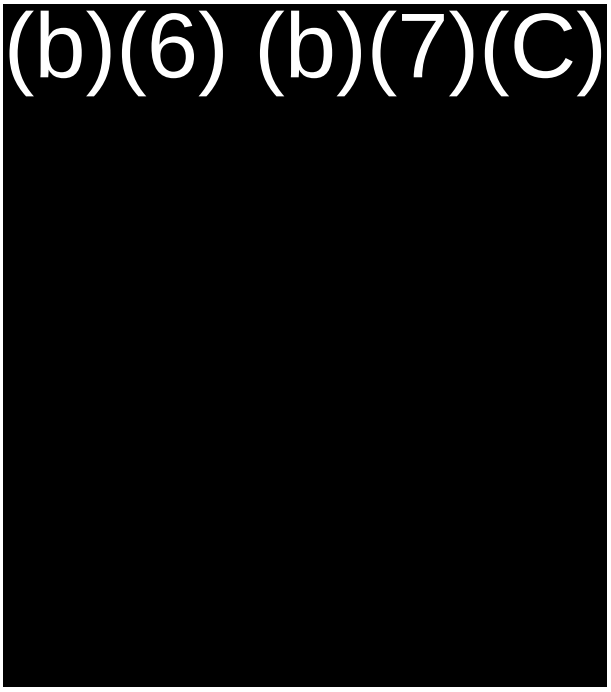


Scenario 6 Personas: Refer USC to Secondary after he/she is confirmed

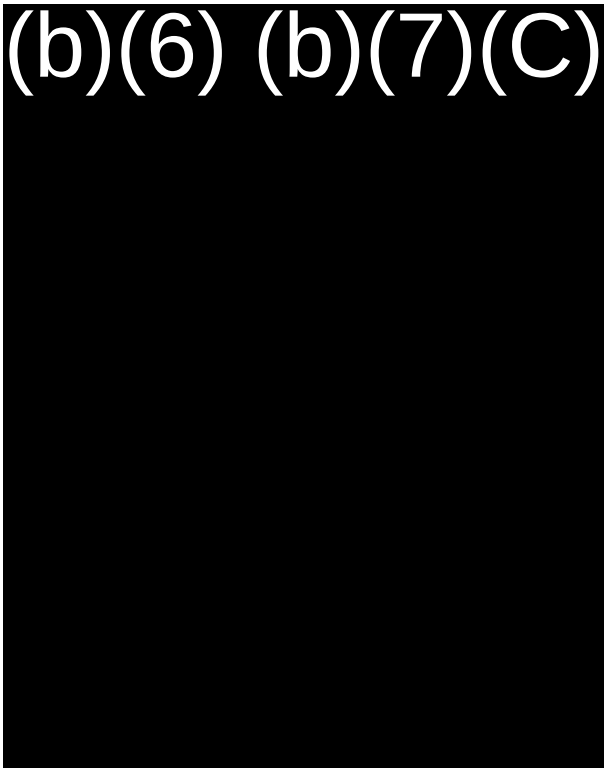
(b)(6) (b)(7)(C)



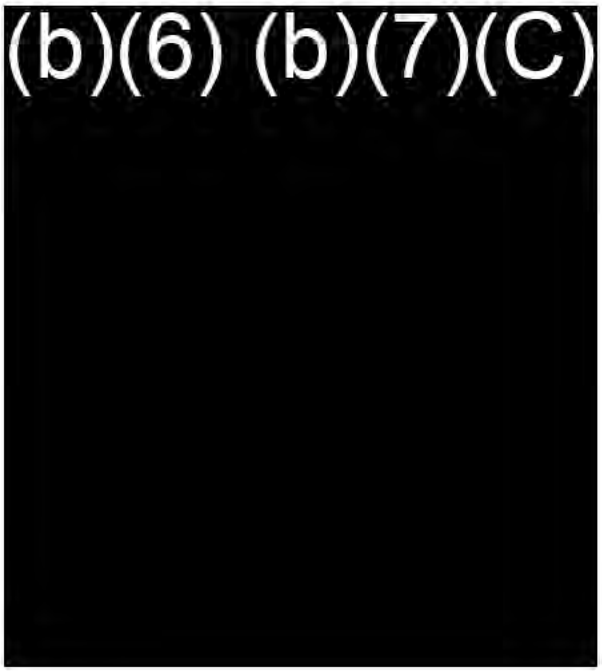
Scenario 7 Personas: Cancel facial match because you do not believe match found is a true match to passenger



Scenario 8 Personas: Passenger with no 1:n match found on gallery and 1:1 facial match found



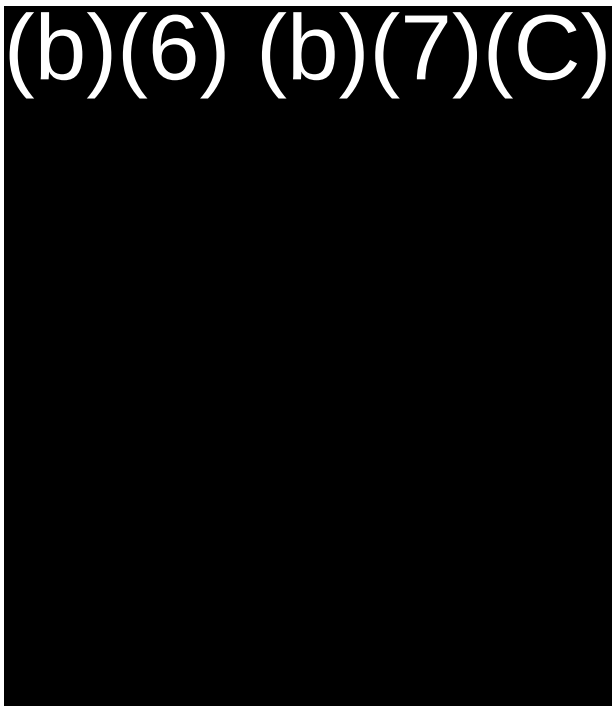
Scenario 9 Personas: Passenger with no 1:n match found and 1:1 facial mismatch



Trainer 2

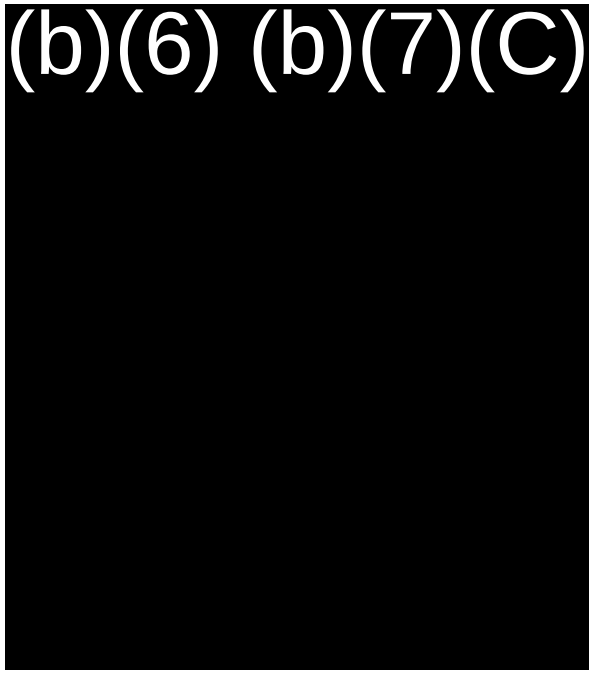
Scenario 1 Personas: US citizen (USC)

(b)(6) (b)(7)(C)



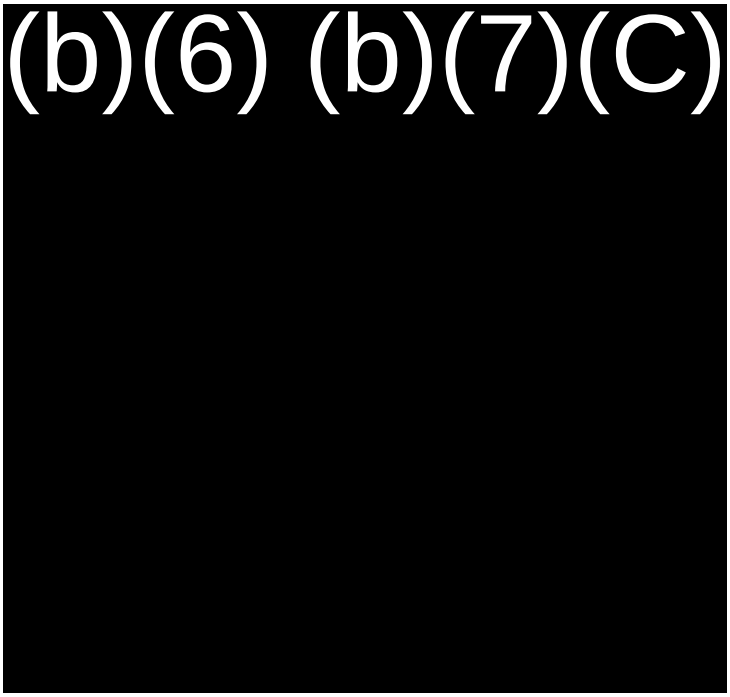
Scenario 2 Personas: USC with (b)(7)(E)

(b)(6) (b)(7)(C)



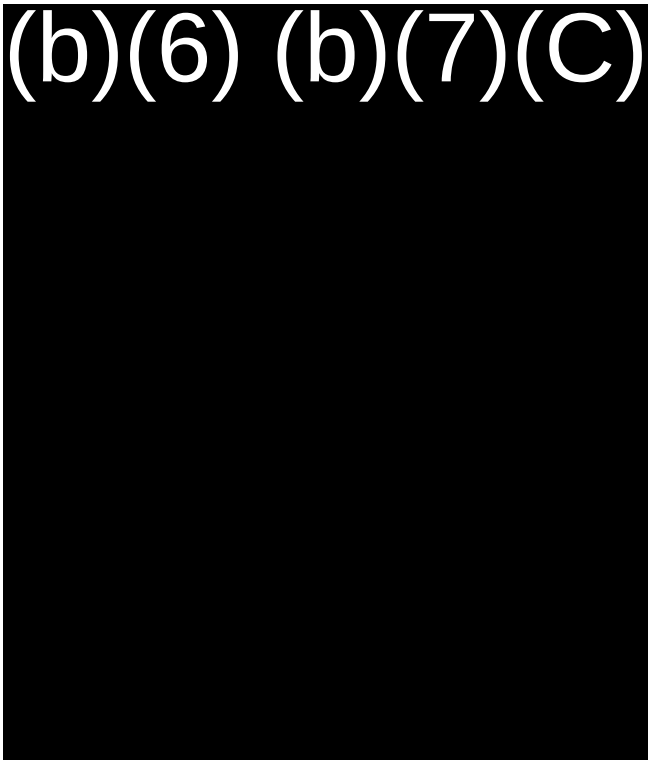
Scenario 3: Non-USC with prints on file

(b)(6) (b)(7)(C)



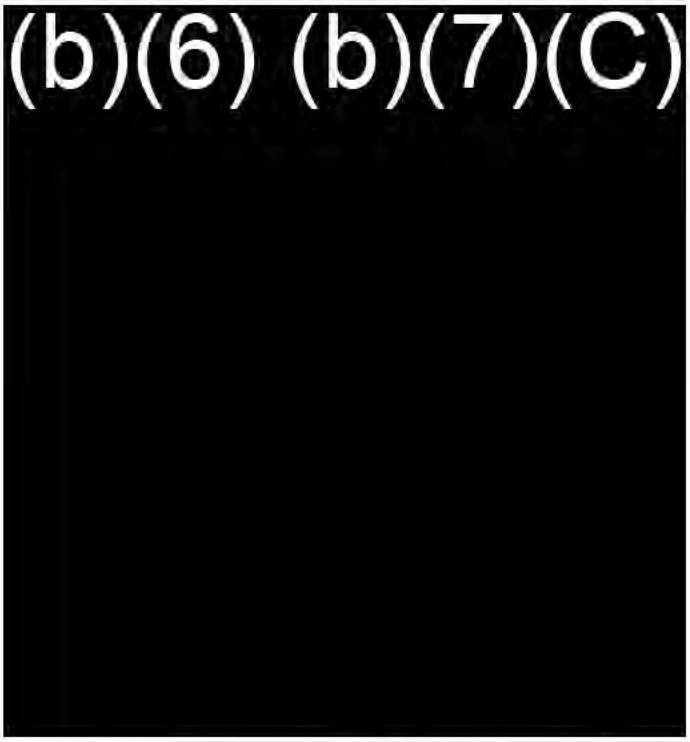
Scenario 4: Non-USC with no prints on file

(b)(6) (b)(7)(C)



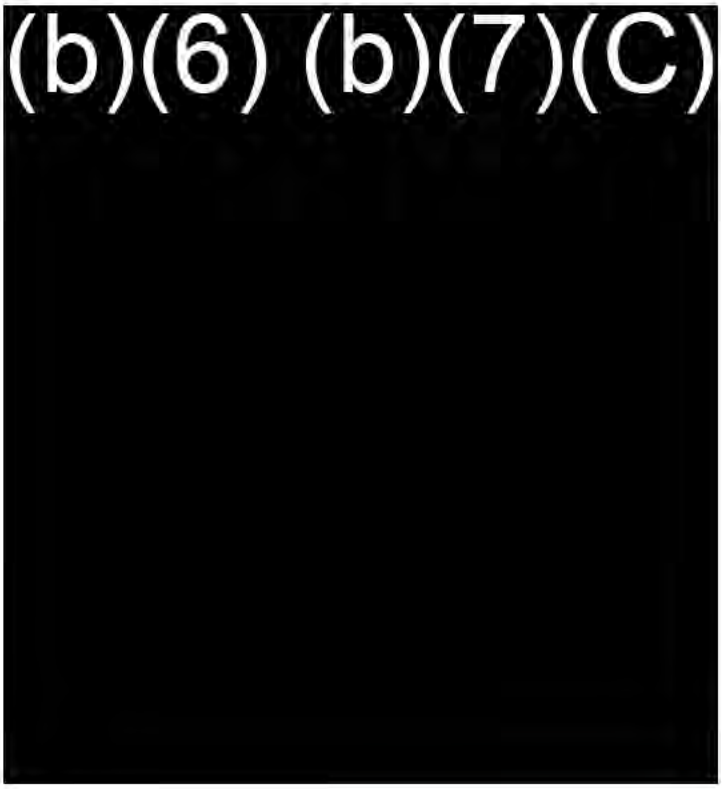
Scenario 5 Personas: USC who was previously confirmed

(b)(6) (b)(7)(C)

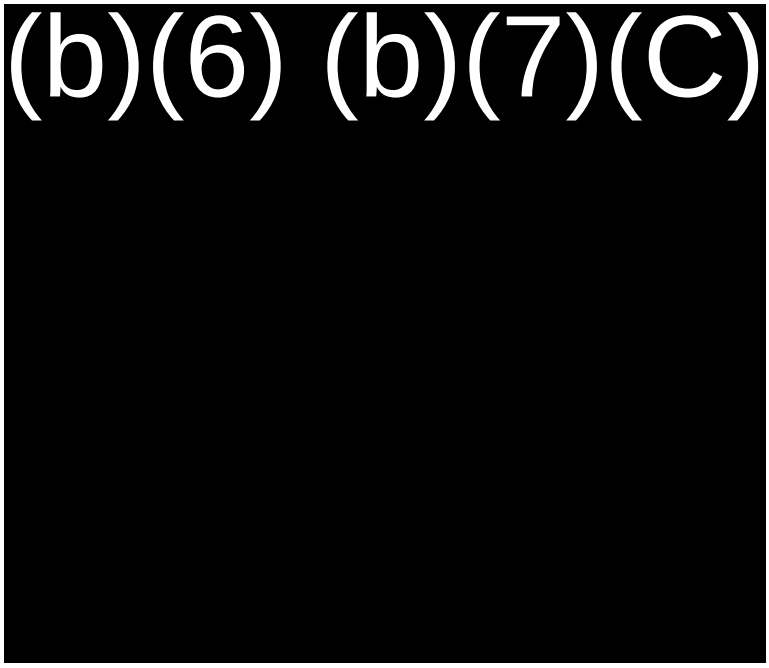


Scenario 6 Personas: Refer USC to Secondary after he/she is confirmed

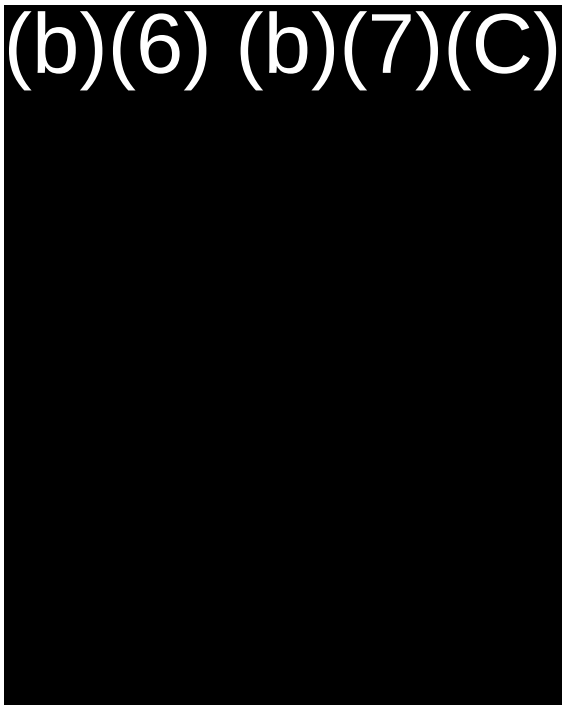
(b)(6) (b)(7)(C)



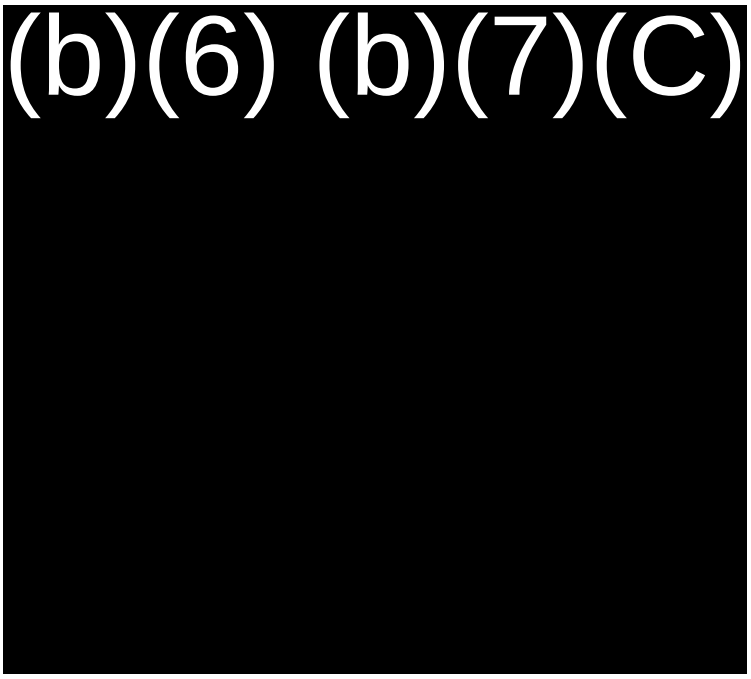
Scenario 7 Personas: Cancel facial match because you do not believe match found is a true match to passenger



Scenario 8 Personas: Passenger with no 1:n match found on gallery and 1:1 facial match found



Scenario 9 Personas: Passenger with no 1:n match found and 1:1 facial mismatch



U.S. Customs and Border Protection

TPAC FACE TRAINING

TRAEN Code: (b)(7)(E)

TPAC FACE TRAINING

U.S. Customs and Border Protection

- Replaces document scan with facial recognition
- Bypasses fingerprint capture for travelers whose good-quality fingerprints are on file when there is a photo match
- Uses existing hardware (b)(7)(E)
- Integrates 1:1 Facial Comparison for travelers not found in the gallery
  - Compares live photo to document photo
  - Fingerprints will be captured for biometric necessary passengers

TPAC FACE IN THE NEWS

U.S. Customs and Border Protection

Dulles CBP's New Biometric Verification Technology Catches Third Impostor in 40 Days

Release Date: October 2, 2018

STERLING, Va., -- U.S. Customs and Border Protection's new cutting-edge facial recognition technology identified a third impostor in 40 days Monday at Washington Dulles International Airport.

The woman, who arrived aboard a flight from Accra, Ghana, presented a U.S. passport to a CBP officer as a returning U.S. citizen. The facial recognition technology reported a mismatch between the photo embedded in the passport chip and the woman who presented the travel document. CBP officers verified the woman's true identity as a 26-year-old Cameroon citizen during a secondary inspection and biometric examination.

Posing as someone else when attempting to enter the United States is a serious violation of U.S. immigration law that could result in criminal prosecution.

An investigation continues.

CBP's facial recognition system is highly effective and efficient at detecting impostors. It compares the face of the traveler presenting the travel document to the face captured in the passport's electronic chip. The facial recognition verification process takes less than 2 seconds. It is designed to quickly confirm a document bearer's identity and significantly reduce passenger processing times.

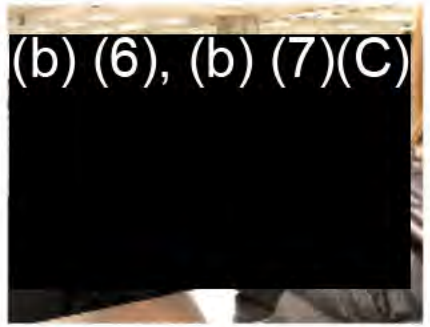
"This latest interception is yet another example of the effectiveness of the facial comparison system we are using to help us detect criminals, terrorists or imposters attempting to enter our country," said Casey Durst, CBP's Director of the Baltimore Field Office. "It has proven highly accurate and is one more tool in our officer's toolbox that helps them accomplish CBP's mission of keeping America safe from people that would do us harm while also helping to facilitate the efficient flow of legitimate travelers."

Metropolitan Washington Airports Authority partnered with CBP at Washington-Dulles International Airport to deploy biometric entry and exit technology using facial comparison to provide additional security and to improve efficiency for international travelers.

This is the third impostor that CBP detected at Washington Dulles International Airport through this new facial comparison technology.

On September 8, CBP officers intercepted a Ghanaian woman presenting a U.S. passport for admission to the United States.

On August 22, CBP officers intercepted a Congolese man presenting a French passport for admission to the United States.



CBP officer admits a traveler recently at Dulles airport using facial recognition technology.

(b) (7)(E)

TPAC FACE TRAINING

U.S. Customs and Border Protection

- What TPAC FACE scenarios are you going to encounter?
  - Facial Match Found
  - Facial Match Not Found
    - Facial 1:1 Match Verified
    - Facial 1:1 Mismatch
  - Facial Exemption – [redacted] (b) (7)(E) [redacted]

TPAC vs. TPAC FACE

U.S. Customs and Border Protection

TPAC

(b)(7)(E)

TPAC FACE

(b)(7)(E)

TPAC FACE TRAINING

U.S. Customs and Border Protection

(b)(7)(E)

(b)(7)(E)

Figure 1: Initial screen – (b)(7)(E)

(b)(7)(E)

(b)(7)(E)

Figure 2: (b)(7)(E)

TPAC FACE TRAINING

U.S. Customs and Border Protection

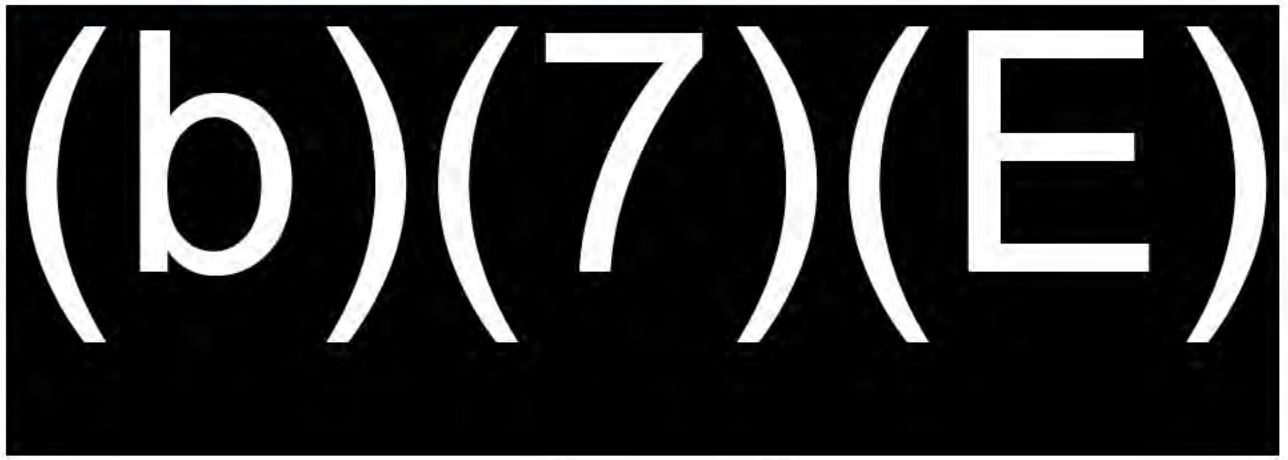


Figure 3: Photo match found

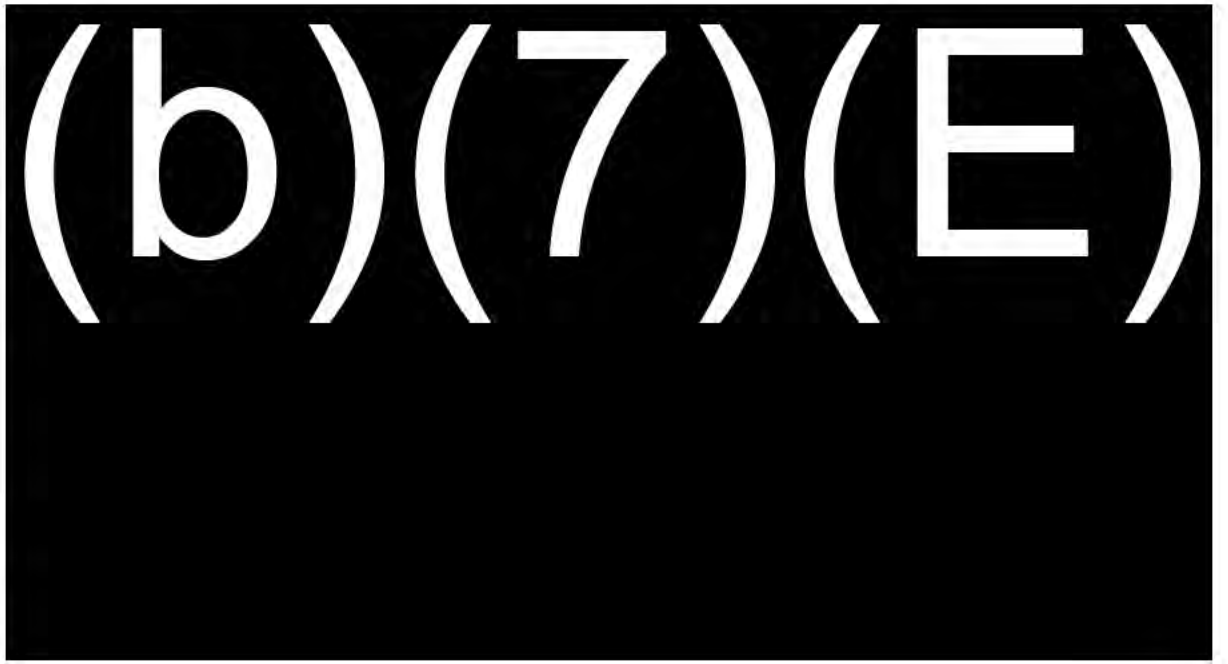


Figure 4: Passenger confirmed

TPAC FACE TRAINING

U.S. Customs and Border Protection

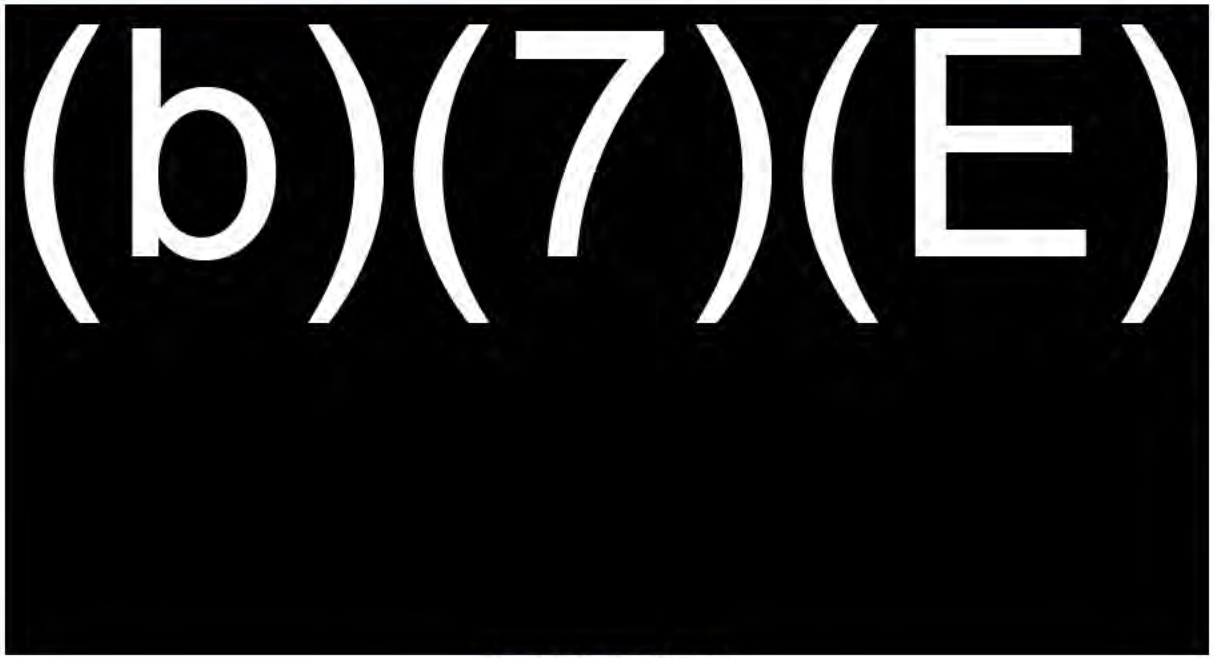


Figure 5: No match found

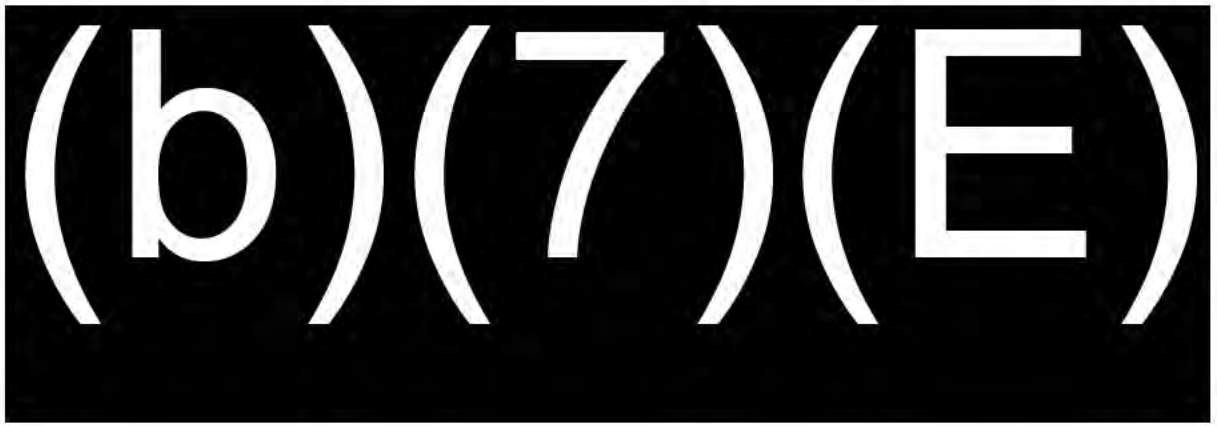


Figure 6: Facial 1:1 match verified

TPAC FACE TRAINING

U.S. Customs and Border Protection

(b)(7)(E)

(b)(7)(E)

Figure 7: Facial 1:1 mismatch

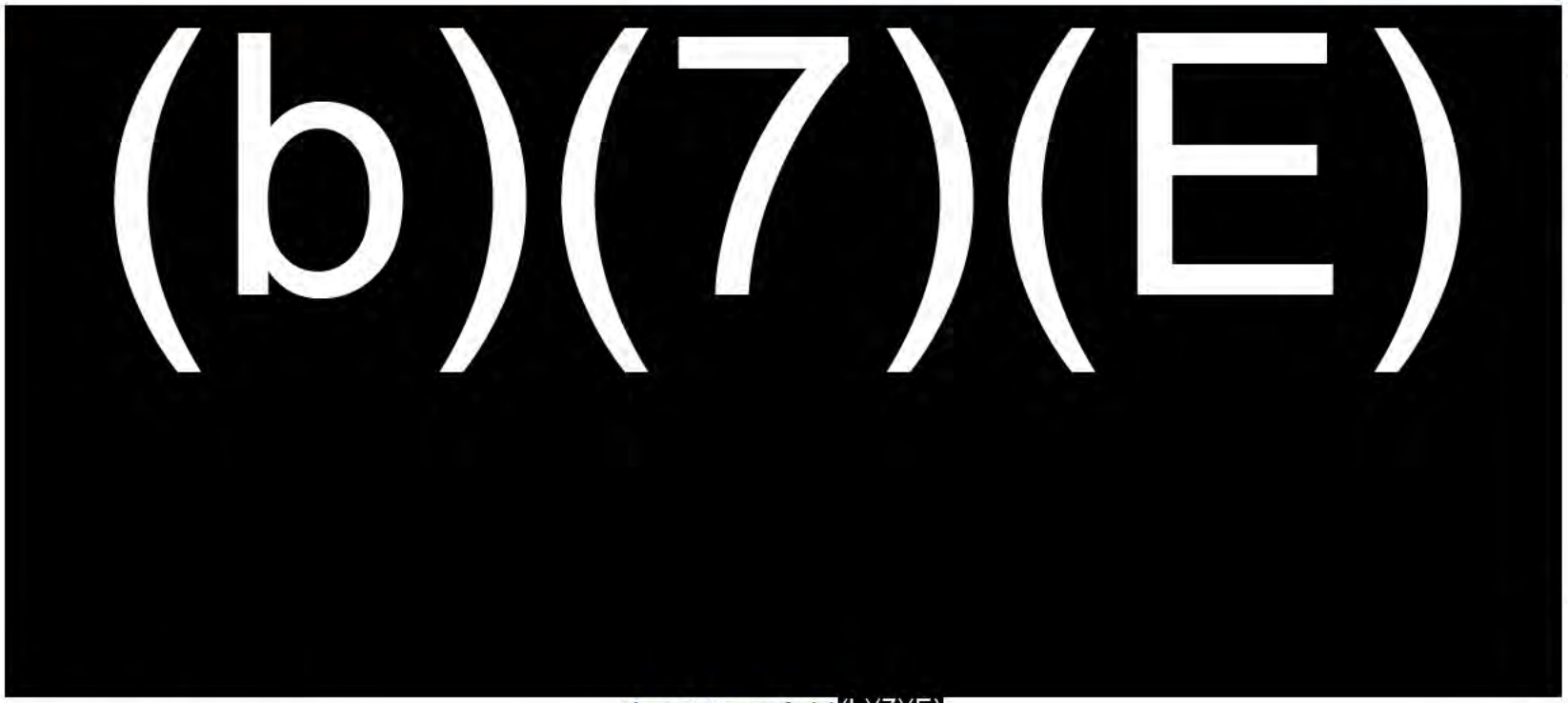
(b)(7)(E)

(b)(7)(E)

Figure 8: Facial 1:1 mismatch referral (b)(7)(E)

TPAC FACE TRAINING

U.S. Customs and Border Protection



To exempt a passenger:

Figure 9: Exempt facial (b)(7)(E)

Exempt Reasons:

- (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)
- **OPTED OUT** – Select this for USCs who opt out from having their photo captured. (b) (7)(E)
- (b)(7)(E)

RESOURCES

U.S. Customs and Border Protection

- **TPAC FACE Training Materials Link**
  - (b)(7)(E)
- **TPAC Online Help**
  - (b)(7)(E)
  - (b)(7)(E)

Device Setup

(b)(7)(E)

Device Login

(b)(7)(E)

(b)(7)(E)

(b)(7)(E)

(b)(7)(E)

TVS Support Email: (b)(7)(E)
TVS Duty Phone: (b)(7)(E)

Traveler Verification Services

Field Support User Guide
Version 1.0

Process Boarding

Step 1

Position the passenger 12-18 inches from the camera device and have the passenger look at the screen.

(b)(7)(E)

Step 1

Hold the boarding pass bar code against the scanner, bar code side down.

(b)(7)(E)

Light?

Step 2A

Let the passenger proceed boarding.

Passenger Processed

Step 2B

The photo quality is poor. Retry until a Green or Blue is displayed.

Step 2C

Notify the officer processing the BEMA device.

Device Shut Down

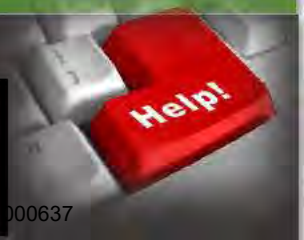
(b)(7)(E)

(b)(7)(E)

TVS Support Email: (b)(7)(E)
TVS Duty Phone: (b)(7)(E)

When reporting, include the following elements:

(b)(7)(E)



Traveler Verification Services

Field Support User Guide
Version 1.0

(b)(7)(E)

When troubleshooting, follow the steps below:

(b)(7)(E)

When reporting, include the following elements:

(b)(7)(E)

TVS Support Email: (b)(7)(E)
TVS Duty Phone: (b)(7)(E)

BIOMETRIC EXIT

TRAVELER VERIFICATION SERVICE

STANDARD OPERATING PROCEDURE

U.S. Customs and Border Protection

March 28, 2018

Version 2.0

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1 Purpose

The Biometric Exit Traveler Verification Service (TVS) Standard Operating Procedure (SOP) provides operational and enforcement guidance to U.S. Customs and Border Protection (CBP) Officers working biometric exit operations at designated Sprint sites. The policies and procedures outlined in this document relate specifically to operations during an outbound flight wherein CBP operates the TVS equipment.

2 Background

TVS is a matching service provided by U.S. Customs and Border Protection (CBP). TVS receives a live captured photo from cameras stationed at departure gates and compares it against a gallery formed of pre-staged photos for designated flights. TVS uses traveler data provided by the carrier via the Advance Passenger Information System (APIS) to identify passengers on a flight manifest. Biographic data from the APIS manifest is used to create the photo gallery. The photos are sourced and compiled from various government holdings, including (b)(7)(E) U.S. Citizenship and Immigration Services, passport and visa databases, Trusted Traveler Programs, and Automated Passport Control. Each gallery is staged (b)(7)(E) prior to the corresponding flight's scheduled departure time and is available for processing (b)(7)(E) before the flight's scheduled departure.

TVS technology operates on the (b)(7)(E) platform and is integrated with Biometric Exit Mobile Application (BEMA). Together, TVS and BEMA:

- Provide (b)(7)(E) (b)(7)(E)
- Provide the capability to capture a traveler's fingerprints for identity verification;
- Provide the capability to biographically or biometrically query a person record; and
- Provide the capability to biographically or biometrically confirm the departure of a traveler from the United States.

3 Policy

TVS operations do not impact existing outbound operations or Passenger Analytical Unit (PAU) or other designated team's review (b)(7)(E). Ports should continue to follow existing policy and procedures. (b)(7)(E) (b)(7)(E) This document will identify which enforcement scenarios will require an exit enforcement action and under which circumstances.

4 Authorities and References

The 1996 Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA, Public Law No. 104-208) called for the creation of an automated system to record arrivals and departures of non-citizens at all air, sea, and land ports of entry. The 2002 Enhanced Border Security and Visa Entry Reform Act (EBSVERA, Public Law No. 107-173), the Intelligence Reform and Terrorism Prevention Act of 2004 (IRTPA, Public Law No. 108-458), and the Implementing Recommendations of the 9/11 Commission Act of 2007 (Public Law No. 110-53) all called for the creation of a nationwide, biometric entry/exit system.

5 Responsibilities

5.1 Port Director

The Port Director or designee is responsible for the following:

- Assign appropriate staff to facilitate and ensure enforcement of this SOP and TVS operations;
- Ensure officers assigned to TVS operations receive appropriate training; and
- Ensure that technical devices and communication materials related to the operation are properly secured.

The Port Director or designee will have the discretion (b)(7)(E) (b)(7)(E)

5.2 Passenger Analytical Unit

The PAU or other designated unit will review the (b)(7)(E) of each TVS flight. If research confirms (b)(7)(E) If research confirms that the record was promoted to the (b)(7)(E) in error, the (b)(7)(E) event should be closed out. Other (b)(7)(E) (b) (7)(E) should be researched as per port policy.

6 Procedures

6.1 Prior to Boarding - Passenger Analytical Unit

When screening the (b) (7)(E), the PAU or other designated team should analyze the flight manifest to (b)(7)(E) The PAU will conduct research on the traveler to determine the status of the traveler and make a determination (b)(7)(E) (b)(7)(E) (b)(7)(E) (b)(7)(E) (b)(7)(E) when the traveler's photo is captured.

6.2 At the Departure Gate

Prior to boarding, TVS equipment will be set up at the gate. This includes:

- Camera set up;
- System log in and flight selection; and
- Placement of signage and communication material.

CBP Officers will review (b)(7)(E) (b)(7)(E) (b)(7)(E) the CBP Officer will take appropriate action as per port policy. (b)(7)(E) (b)(7)(E)

6.3 Boarding

- As boarding begins, the traveler will approach the TVS camera and stand approximately two feet in front of the screen. Photo capture is initiated automatically.
- If a photo capture does not automatically initiate, CBP Officers should advise the traveler to move closer to the camera.
- Once a suitable image is captured and matched, the camera instructs the traveler to proceed with boarding. A green light is also visible on the camera.
- If (b) (7)(E) (b) (7)(E) a yellow light will be displayed and the camera will make additional attempts to capture a photo. If (b) (7)(E) CBP Officers will direct travelers to an officer using BEMA to verify identity (b) (7)(E) (b) (7)(E)
- If (b) (7)(E), the camera will display an exclamation mark and instruct the traveler to proceed. The camera will display a blue light (b)(7)(E) CBP Officers will monitor the cameras and BEMA devices for alerts. CBP officers will escort or direct the traveler to a designated area for exception processing.

6.4 Post Boarding

After each flight, all TVS equipment will be properly (b)(7)(E) stored. If signage is not left at the gate, it should be stored with the TVS equipment.

7 Exception Processing

7.1 Alternate Processing

U. S. citizens (USCs) and other classes of travelers may be exempt from biometric collection and require manual identity verification. BEMA devices provide the alternate mechanism for identity verification for non-U.S. citizens when the biometric capture devices are unable to capture a satisfactory photo and/or TVS cannot match the traveler to the photo gallery. For additional guidance on BEMA use and special encounters, such as travelers who overstayed the duration of their visa or who entered the country without an inspection, see the *Biometric Exit-Mobile Standard Operating Procedure*.

7.1.1 United States Citizens, U.S Military Personnel and Travelers Exempt[1] from Biometric Collection

If TVS is unable to verify the identity of a traveler for any reason, CBP officers should conduct a manual inspection of the travel documents to determine citizenship and identity. If the CBP Officer is satisfied that the USC traveler is the true bearer of the presented documents and the documents are valid, the traveler will be allowed to board the flight. BEMA confirmation is not conducted.

7.1.2 Non-U.S. Citizens

If TVS is unable to verify the identity of a non-USC traveler and a blue light is displayed, the CBP Officer will (b)(7)(E). (b)(7)(E) (b)(7)(E) the CBP Officer will swipe the valid travel document to initiate the BEMA process. Officers will review the (b)(7)(E) determine if additional system queries are necessary and collect biometrics. BEMA procedures are outlined in the

[1] In-scope status is defined under 8 CFR 235.1(f)(1)(ii) to (iv) for entry and 8 CFR 215.8(a)(2)(i) to (iv) for exit

Biometric Exit-Mobile Standard Operating Procedure.

Once results are returned, the CBP Officer can review those results while interviewing the passenger to determine their immigration status in the United States. (b) (7)(E) (b) (7)(E) (b) (7)(E) The CBP Officer should review the records to determine if the information is actionable in accordance with existing guidance and policy. (b)(7)(E) (b)(7)(E) (b)(7)(E)

If the CBP Officer (b) (7)(E) (b) (7)(E) he or she will conclude the examination, select the (b)(7)(E) option, and allow the traveler to board the plane. (b)(7)(E) (b)(7)(E) (b)(7)(E) (b)(7)(E)

(b)(7)(E)

- (b)(7)(E)
- (b)(7)(E)

7.2 Travelers with Disabilities

Traveler with disabilities may be escorted and assisted by airline personnel, wheelchair service providers, and/or family members. Others may be traveling without escort or assistance.

Travelers with disabilities, unless otherwise exempt or excepted, are not exempt from biometric capture.

- Travelers in wheelchairs are not required to stand, but should be instructed to present themselves to the TVS technology for photo capture. The camera is designed to capture images in a low to high height range.
- Travelers with impaired vision, hearing, or other disabilities may need instructions from a CBP Officer. (b) (7)(E) (b) (7)(E)

7.3 Travelers with Religious Head Wear

Travelers wearing religious headwear wherein the face is visible require no action or special accommodations. The TVS equipment will adjust to capture the photo.

Travelers wearing religious headwear wherein the face is covered or obscured, officers may use discretion consistent with CBP Policy. (b)(7)(E) (b)(7)(E) (b)(7)(E)

7.4 Surgical/Medical Masks

Travelers wearing surgical/medical masks require no action on the part of the CBP Officer. TVS, in most cases, can make a match based off other facial features. (b)(7)(E) (b)(7)(E) the officer can ask the traveler to remove the mask for the photo (b) (7)(E) (b) (7)(E)

7.5 Travelers Who Refuse To Participate

(b)(7)(E)

(b)(7)(E)

(b)(7)(E)

8 EWI Processing

(b)(7)(E)

- (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)
  - (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)

(b)(7)(E)

- (b)(7)(E)

(b)(7)(E)

(b)(7)(E) the individuals will be escorted to the CBP area and processed in accordance with port policy and/or the non-arriving alien policy.

9 Equipment Failure and Other Technical Issues

If the equipment fails or there are other technical issues, the CBP Officer should notify his or her supervisor immediately and suspend operations until the problem is resolved. (b)(7)(E)

(b)(7)(E)

(b)(7)(E)

Contact the Office of Information and Technology (OIT) Enterprise Operations Center (EOC) as follows:

- (b)(7)(E)
- (b)(7)(E)

(b)(7)(E)

(b)(7)(E)

(b)(7)(E)

Traveler Verification Service

(Cloud-Based Matching)

Technical Reference Guide – (b) (7)(E)

U.S. Customs and Border Protection

March 2019

Version 1.9

Change Control Log

Revised By	Revised Version Number	Date	Description of Revisions
CBP OIT	V1.0	02/15/2017	Initial Document
CBP OIT	V1.1	03/21/2017	1. (b)(7)(E) 2. (b)(7)(E) 3. (b)(7)(E) 4. (b)(7)(E)
CBP OIT	V1.2	05/04/2017	1. (b)(7)(E) 2. (b)(7)(E)
CBP OIT	V1.3	05/10/2017	1. (b)(7)(E) 2. (b)(7)(E) 3. (b)(7)(E)
CBP OIT	V1.4	05/17/2017	1. (b)(7)(E) 2. (b)(7)(E)
CBP OIT	V1.5	05/23/2018	1. Addition of Details for Cruise Vessels
CBP OIT	V1.6	07/20/2018	1. (b)(7)(E)
CBP OIT	V1.7	09/18/2018	1. (b)(7)(E) 2. (b)(7)(E) 3. (b)(7)(E) 4. (b)(7)(E)
CBP OIT	V1.8	01/11/2019	1. (b)(7)(E) 2. (b)(7)(E)

Revised By	Revised Version Number	Date	Description of Revisions
			3. (b)(7)(E)
CBP OIT	V1.9	03/22/2019	1. (b)(7)(E) 2. (b)(7)(E)

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1. Introduction

1.1 Background

U.S. Customs and Border Protection (CBP) is transforming the way it identifies and verifies travelers by shifting the key to unlocking the passenger profile from biographic to biometric identifiers. The CBP Office of Field Operations (OFO) has developed a comprehensive strategy to implement a biometric entry-exit solution for travelers departing by air, land, and sea as well as to provide enhancements for existing biometric entry capabilities. This strategy addresses the operational requirements aligned with capabilities to enhance CBP's ability to execute its border security mission:

- **Verify Traveler Identity**: The ability to capture, review, analyze, search, and match travelers' biometric information with Government biometric and biographic records when entering and exiting the U.S. for the purposes of verifying identity
- **Create and Manage Biometric Records**: The ability to record, store, and disseminate biometric information (b) (7)(E) collected from non-U.S. citizen travelers entering and exiting the U.S.
- **Generate Metrics and Reports**: The ability to measure and report the effectiveness of the biometric entry-exit system

(b) (7)(E) . The Traveler Verification Service (TVS) is the next transitional step towards deployment of reliable and repeatable biometric verification capabilities in the Air Exit/Entry, Sea Exit/Entry, and Land environments.

1.2 Overview and Purpose

CBP provides a (b)(7)(E) Service for external stakeholders to use for submission of traveler photos (b)(7)(E)

(b) (7)(E) This document will be used in conjunction with the Technical Reference Guide (b) (7)(E) provided separately. CBP OIT will work closely with each stakeholder in developing, testing, and implementing the software.

1.3 Scope

The scope of this document covers the following modalities within the CBP external environment:

- Air Exit – Biometric verification of travelers exiting the U.S. at outbound international departure gates
- Transportation Security Administration (TSA) – Biometric verification of international travelers at TSA Checkpoints
- Sea Entry – Biometric verification of travelers entering the U.S. at sea ports
- (b)(7)(E) – Non-Department of Homeland Security (CBP and TSA) confirmations and/or enforcement related biometric verification of traveler identities in support of a "Seamless Traveler Experience" such as in the following areas: boarding (foreign inbound), check in, baggage drop, and other approved uses.

2. Project Planning

All projects start with initiating an engagement and committing to implementing a biometric verification process. Generally, each project takes the following steps from initiation to implementation.

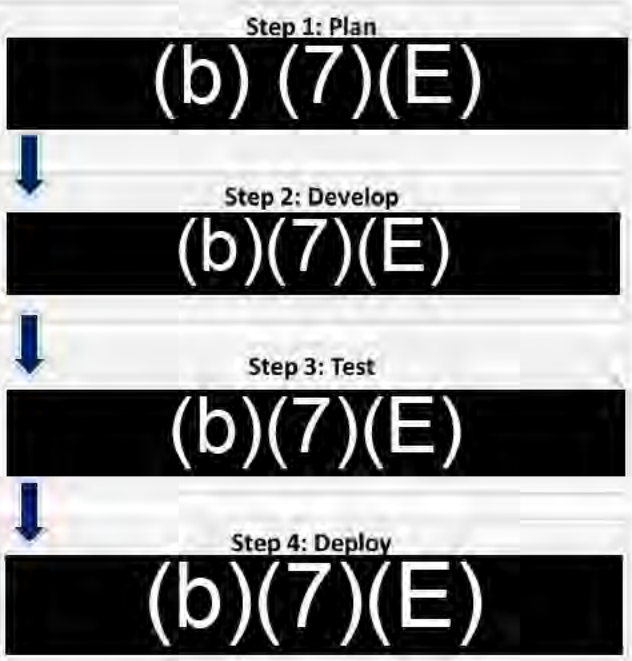

Figure 1: TVS Project Plan

2.1 Step 1: Plan

(b) (7)(E)

2.2 Step 2: Develop

(b) (7)(E)

2.3 Step 3: Test

(b) (7)(E)

2.4 Step 4: Deploy

Upon successful completion of the Test Step, the solution is ready for deployment. (b) (7)(E)

(b) (7)(E)

3. Internet Connectivity

3.1 Networking

(b) (7)(E)

3.1.1 (b)(7)(E)

3.1.2 (b)(7)(E)

3.2 (b)(7)(E)

(b)(7)(E)

3.2.1 (b)(7)(E)

3.3 (b)(7)(E)

Provided below is a (b) (7)(E)

Figure 2: (b) (7)(E)

4. Authentication Service

The Authentication Service is a cloud service that allows the authentication of users.(b) (7)(E)

(b) (7)(E)

(b)(7)(E)

Figure 3: (b)(7)(E)

4.1 Login (b)(7)(E)

(b)(7)(E)

(b)(7)(E)

4.1.1 Login Request Message Elements

(b)(7)(E)

4.1.2 Login Response Message Elements

(b)(7)(E)

4.1.3 **Login Considerations**: The following are important considerations when using the Login (b)(7)(E):

- (b)(7)(E)
- (b)(7)(E)
- (b)(7)(E)

4.2 (b)(7)(E)

(b)(7)(E)

(b)(7)(E)

4.2.1 (b)(7)(E) Request Message Elements

(b)(7)(E)

4.2.2 (b)(7)(E) Response Message Elements

(b)(7)(E)

4.3 Change Password (b)(7)(E)

The Change Password (b)(7)(E) allows an authenticated user to change their existing password to a new password.

(b)(7)(E)

4.3.1 Change Password Request Message Elements

(b)(7)(E)

4.3.2 Change Password Response Message Elements

(b)(7)(E)

4.4 (b)(7)(E)

(b)(7)(E)

(b)(7)(E)

5. TVS Environments

5.1 (b)(7)(E)

(b) (7)(E)

5.2 (b)(7)(E)

(b) (7)(E)

5.3 (b) (7)(E)

(b) (7)(E)

(b) (7)(E)

6. Contact Information

Send questions and comments related to this reference guide to (b)(7)(E)

(b)(7)(E)

Traveler Verification Service

(Cloud-Based Matching)

Technical Reference Guide – (b) (7)(E)

U.S. Customs and Border Protection

April 2019

Version 1.1

Change Control Log

Revised By	Revised Version Number	Date	Description of Revisions
CBP OIT	V1.0	09/12/2018	Initial Document
CBP OIT	V1.1	04/04/2019	1. (b)(7)(E) 2. (b)(7)(E) 3. (b)(7)(E) 4. (b)(7)(E)

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1.3 Scope

The scope of this document covers the (b) (7)(E) subtypes within the CBP external environment. (b)(7)(E) it is offered as part of CBP's commitment to leveraging law enforcement technology in support of the "Seamless Traveler Experience" such as in the following areas:

1.4 (b) (7)(E) Subtypes

- **Check in:** Facial recognition at the airline's check in counter or kiosks.
- **Baggage Drop:** Facial recognition at baggage drop.
- **Boarding:** Facial recognition of traveler identities at a foreign international inbound gate.

2. Project Planning

All projects start with initiating an engagement and committing to implementing a biometric verification process. Generally, each project takes the following steps from initiation to implementation.

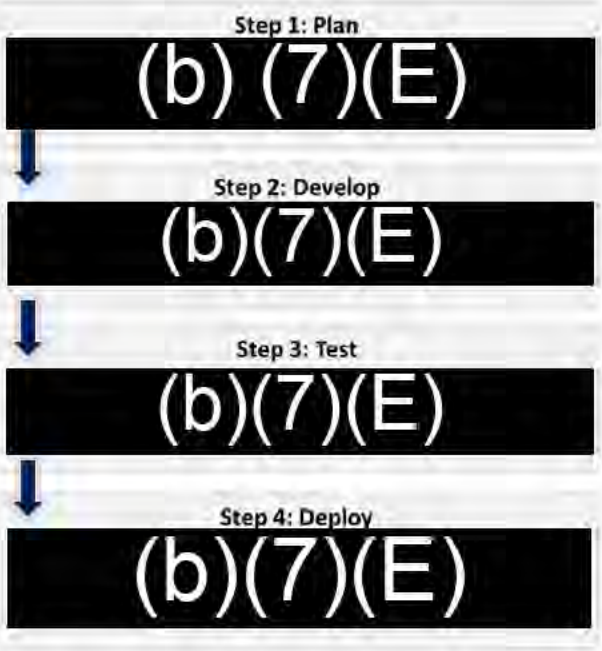


Figure 1: TVS Project Plan

2.1 Step 1: Plan

(b) (7)(E)

2.2 Step 2: Develop

(b)(7)(E)

(b) (7)(E)

. (b) (7)(E)

2.3 Step 3: Test

(b) (7)(E)

2.4 Step 4: Deploy

Upon successful completion of the Test Step, the solution is ready for deployment. (b) (7)(E)
(b) (7)(E)
.

3. Internet Connectivity

3.1 Networking

(b) (7)(E)
.

3.1.1 (b)(7)(E)

3.1.2 (b)(7)(E)
(b)(7)(E)

3.2 (b)(7)(E)

(b)(7)(E)

3.2.1 (b)(7)(E)

3.3 (b)(7)(E)

Provided below is a (b) (7)(E) .

Figure 2: (b) (7)(E)

4. Identify Service (b) (7)(E)

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

(b) (7)(E)

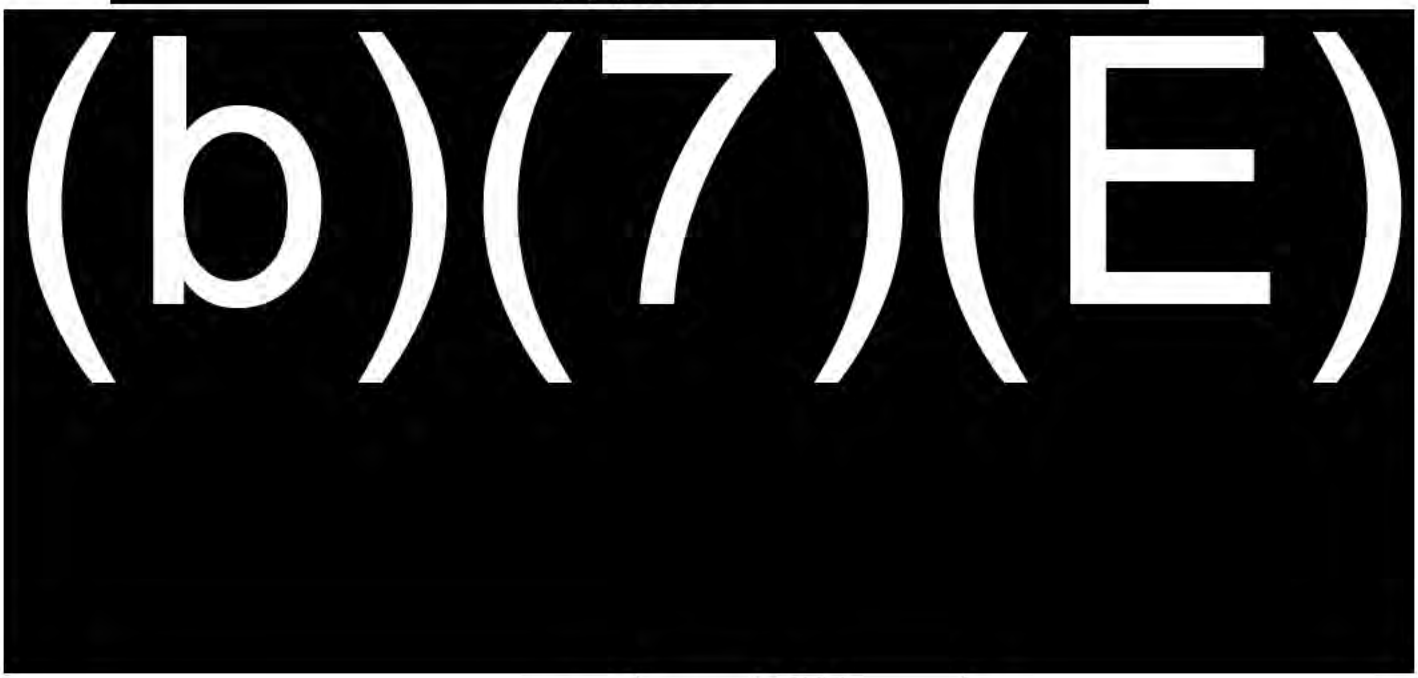


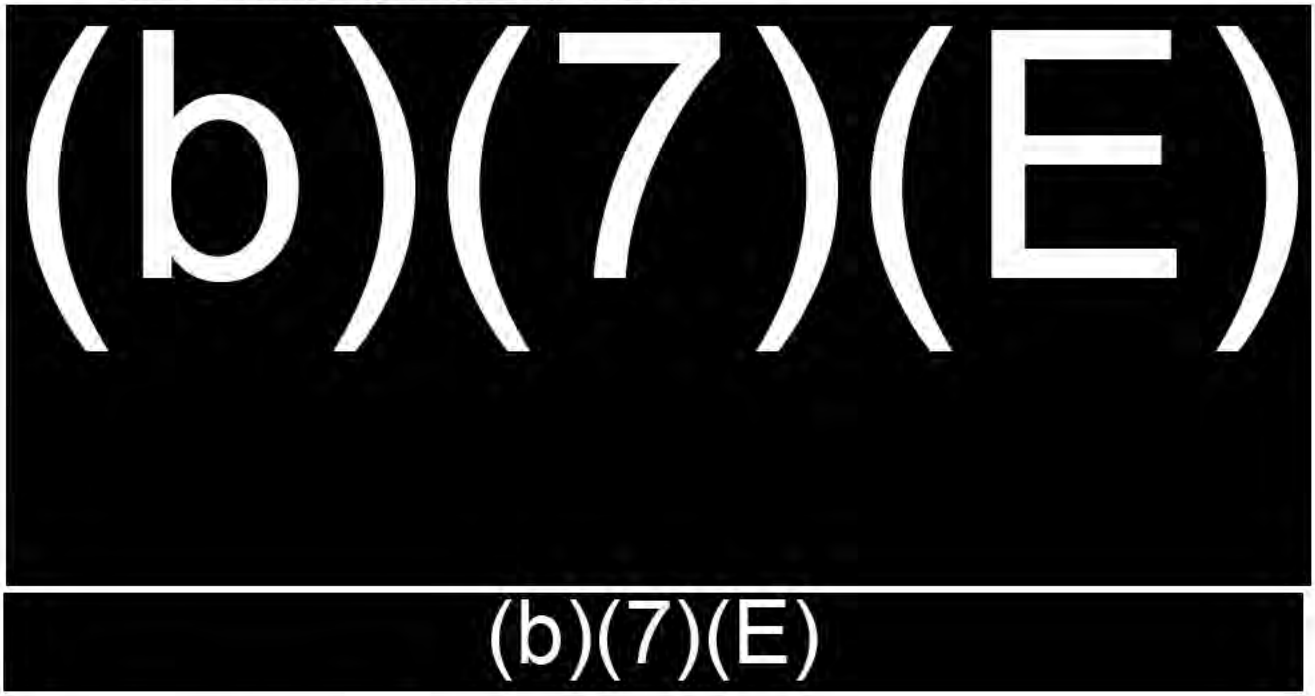
Figure 3: (b)(7)(E)

4.1 Identify (b)(7)(E)

(b)(7)(E)

4.1.1 Identify Request Message Elements

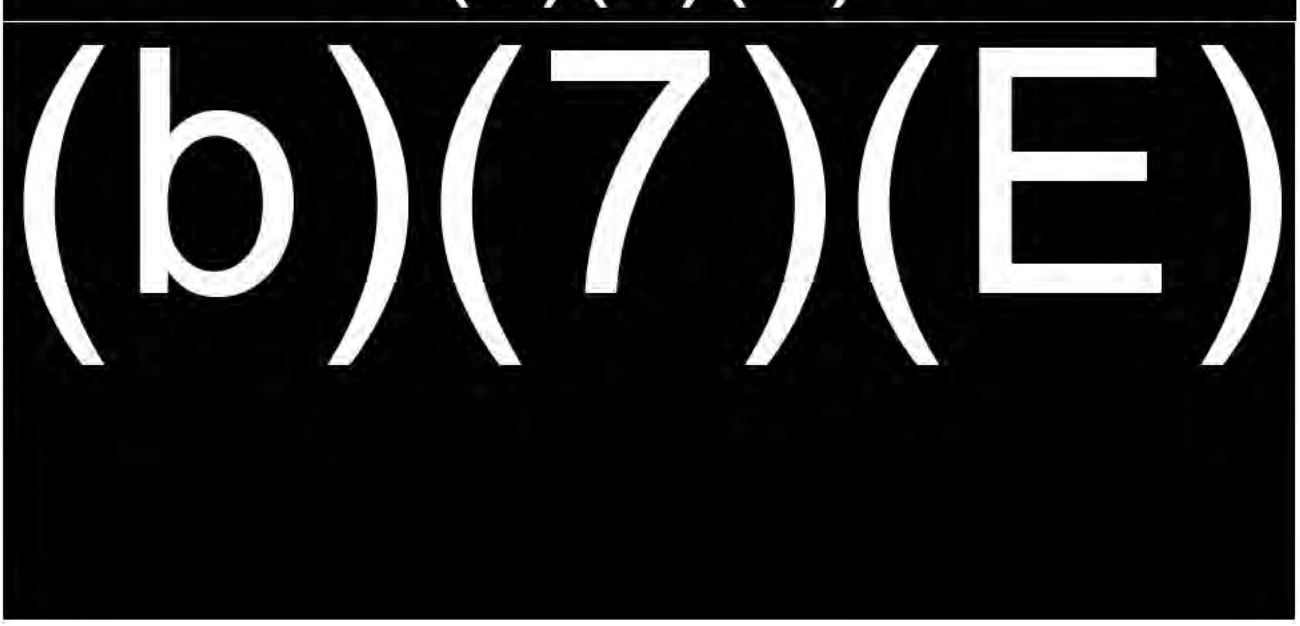
4.1.2 Identify Response Message Elements



(b)(7)(E)

4.2 (b)(7)(E)

(b)(7)(E)



5. Photo Specifications

(b)(7)(E) A photo shall have reasonable compliance with the ANSI/NIST ITL 1-2011 Type 10 standards (b) (7)(E)

(b) (7)(E)

The photo shall include the following characteristics:

(b) (7)(E)

6. TVS Environments

6.1 (b)(7)(E)

(b) (7)(E)

6.2 (b)(7)(E)

(b) (7)(E)

6.3 (b) (7)(E)

(b) (7)(E)

7. Contact Information

Send questions and comments related to this reference guide to (b)(7)(E).

(b) (7)(E)

(b) (7)(E)