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Immigration: The U.S. Entry-Exit System

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SUMMARY

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Immigration: The U.S. Entry-Exit System

The U.S. entry-exit system aids in immigration enforcement, national security, and travel facilitation. For example, the system assists U.S. Customs and Border Protection (CBP) in making determinations about whom to allow to enter the United States (*admissibility determinations*). It also helps the Department of Homeland Security (DHS) identify persons who overstay their visas. The system is currently incomplete and does not yet meet all of its statutory requirements.

In 1996, Congress mandated the development of an entry-exit system to collect the records of noncitizen arrivals and departures. Since then, Congress has amended the system's requirements and deadlines on several occasions, including by adding a biometric requirement in 2001.

After piloting various biometric technologies, CBP determined facial recognition technology (FRT) to be the best fit operationally. More specifically, CBP, in partnership with the Transportation Security Administration (TSA), deploys the Traveler Verification Service (TVS), a facial recognition matching technology used to verify travelers' identities. TVS is a public-private partnership between the federal government and private airlines, airports, and cruise lines. U.S. citizens are not required to provide biometrics upon arrival or departure from the United States.

The entry-exit system is in different stages of completion depending on the type of port of entry (POE) (i.e., air, land, or sea) and the type of information gathered (i.e., biographic vs. biometric data). The air entry portion is complete; the United States collects biographic and biometric data from foreign national travelers entering the United States at all air POEs. For those departing the United States by air, biographic data are collected on all travelers, whereas biometric data are collected on approximately 80% of in-scope travelers (i.e., foreign nationals ages 14-79). In the sea environment, biographic data are collected upon entry and exit at U.S. sea POEs, but biometric data are collected only upon entry. The land environment poses the most significant logistical challenges and is the least complete part of the entry-exit system. While biographic and biometric data are collected upon entry at land POEs (though U.S. citizens can opt out of biometric data collection), biographic exit data collection varies depending on whether individuals exit through POEs at the northern or southern border. The collection of biographic exit data at the northern border is accomplished through the Beyond the Border partnership with Canada, in which the countries exchange biographic data so that an entry into Canada is recorded as an exit from the United States and vice-versa. The United States does not have a similar agreement with Mexico. Instead, for those who exit through POEs on the southern border, in most cases CBP can be certain that an individual had previously departed the United States only if he or she subsequently re-enters the United States. CBP is currently piloting FRT for pedestrian and vehicle land exits.

While Congress has shown long-standing interest in the country's entry-exit system, a current focus has been on the completion of the biometric exit portion of the system. Some policymakers are also are concerned about the accuracy of FRT and the security of biometric data, including issues surrounding data storage and the auditing of private partners and contractors who collect these data. Further, though U.S. citizens can opt out of biometric data collection at POEs, some policymakers have expressed interest in how this is communicated to the public.

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The U.S. entry-exit system has three broad goals: immigration enforcement, national security, and travel facilitation. These goals include determining who is *inadmissible* and identifying *overstays*, identifying criminals and terrorists, and facilitating the efficient flow of travelers. These policy goals are often in tension. For example, efforts to identify and avert inadmissible foreign nationals and bad actors may delay the flow of legitimate travelers and commerce, while efforts to expedite admissions may increase the risk that inadmissible travelers or illicit goods are overlooked.

The completion of a comprehensive entry-exit system has been a persistent subject of congressional concern. Congress mandated the creation of an automated entry-exit system in 1996 that would capture every entry to and exit from the United States of foreign nationals traveling to and from the United States and added a biometric requirement in 2001.[1] While the biometric entry portion of the system has been fully operational since December 2006, implementing biometric exit has been more of a challenge.

This report provides an overview of the country's entry-exit system.[2] It provides a summary of the statutory requirements of the system, including the mandate that it uses biometric identifiers. The report explains which biometrics are taken upon entry and/or exit to the United States, how the facial recognition technology works, and who is required to provide biometric data. It then provides an explanation of how the entry-exit system works and its stage of development in different environments: air, sea, and land ports of entry (POEs). The report concludes with policy considerations for Congress, including the accuracy, security, and storage of biometric data and the ability of U.S. citizens to opt out, among other things.

Immigration Enforcement Goals of the Entry-Exit System

The entry-exit system allows the United States to make inadmissibility determinations (including protecting against illegal entry) and helps the government discover individuals who overstay their visas or their periods of authorized stay.

Inadmissibility

At POEs, U.S. Customs and Border Protection (CBP) officers must determine whether foreign nationals are inadmissible under the Immigration and National Act of 1952 (INA, P.L. 82-414), as amended.[3] They interview arriving travelers, examine their travel documents, and check them against various law enforcement databases to help make that determination. (For more information about these checks, see the "Air Entry and Exit" section.)

[1] See the "Statutory Requirements" section of this report.

[2] For more information on the range of potential threats at the border—such as transnational criminals, terrorists, and illegal goods—see CRS Report R42969, *Border Security: Understanding Threats at U.S. Borders*.

[3] Most foreign nationals visiting the United States are subject to some form of screening prior to their arrival at U.S. POEs, including when they apply for visas or enter through the Visa Waiver Program, as well as through CBP's screening of information provided by air and sea carriers. For example, Department of State consular officers abroad determine admissibility for individuals applying for U.S. visas. For more information, see CRS Report RL32221, *Visa Waiver Program*, CRS Report R45040, *Immigration: Nonimmigrant (Temporary) Admissions to the United States*; and CRS Report R42866, *Permanent Legal Immigration to the United States: Policy Overview*.

Section 212(a) of the INA (codified at 8 U.S.C. §1182) specifies broad classes of inadmissible noncitizens, including those who

- have a "communicable disease of public health significance,"[4]
- have committed certain criminal offenses,[5]
- are terrorists or national security concerns,[6]
- are likely at any time to become a *public charge* (i.e., become indigent),[7]
- are seeking to work without proper labor certification,[8]
- are attempting to enter illegally or have previously violated immigration law,[9]
- are ineligible for citizenship,[10] or

[4] INA §212(a)(1) (8 U.S.C. §1182(a)(1)). The INA does not define *communicable disease of public health significance*, tasking the Secretary of Health and Human Services to do so by regulation. See the following archived CRS reports for background information: CRS Report R40570, *Immigration Policies and Issues on Health-Related Grounds for Exclusion*, and CRS Report R41104, *Immigration Visa Issuances and Grounds for Exclusion: Policy and Trends*.

[5] INA §212(a)(2) (U.S.C. §1182(a)(2)). The INA prohibits the admission of certain criminals, including noncitizens who have committed crimes of moral turpitude, noncitizens with multiple serious criminal convictions, controlled substance traffickers, noncitizens engaged in prostitution or commercialized vice, significant traffickers in persons, and money launderers, among others. For more information, see CRS Report R42969, *Border Security: Understanding Threats at U.S. Borders*, and CRS Legal Sidebar LSB10603, *Discretionary Waivers of Criminal Grounds of Inadmissibility Under INA § 212(h)*.

[6] INA §212(a)(3)(B) (8 U.S.C. §1182(a)(3)(B)). The INA prohibits the admission of any noncitizen who has engaged in a terrorist activity, is considered likely to engage in terrorist activity, has incited terrorist activity, or is a representative of a terrorist organization or a group that endorses or espouses terrorist activity. The INA describes a variety of specific terrorist activities, including the hijacking or sabotage of any conveyance, the seizure or threatened violence against another individual in order to compel a third person or governmental organization to perform or abstain from an activity, violence against an internationally protected person, assassination, and the use of a weapon of mass destruction or other dangerous device other than for personal monetary gain. For more information, see CRS Report R42969, *Border Security: Understanding Threats at U.S. Borders*.

[7] INA §212(a)(4) (8 U.S.C. §1182(a)(4)). Immigration law in the United States has long contained exclusion and removal provisions designed to limit government spending on indigent non-U.S. nationals. The INA does not define the term *public charge*; the definition has been set forth by agency guidance and regulation. For more information, see CRS Insight IN11217, *Immigration: Public Charge 2022 Final Rule*.

[8] INA §212(a)(5) (8 U.S.C. §1182(a)(5)). The foreign labor certification program in the U.S. Department of Labor (DOL) is responsible for ensuring that foreign workers do not displace or adversely affect working conditions of U.S. workers. Under current law, DOL adjudicates labor certification applications for permanent employment-based immigrants, temporary agricultural workers, and temporary nonagricultural workers, as well as labor attestations for temporary professional workers. See the following archived CRS reports for background information: CRS Report RL33977, *Immigration of Foreign Workers: Labor Market Tests and Protections*, and CRS Report R41104, *Immigration Visa Issuances and Grounds for Exclusion: Policy and Trends*.

[9] INA §212(a)(6)-(7) (8 U.S.C. §1182(a)(6)-(7)). Any foreign national who is present in the United States without being legally admitted or paroled, or who arrives in the United States at any time or place other than as designated, is inadmissible. Foreign nationals who "without reasonable cause" fail to attend their removal proceedings are inadmissible for a period of five years following their subsequent departure. Any foreign national who has, by fraud or willful misrepresentation of a material fact, sought to procure or has procured either admission into the United States or a benefit under the INA is inadmissible. A noncitizen who falsely represents himself or herself to be a U.S. citizen for any purpose or benefit under the INA or any other federal or state law is also inadmissible for life, except under narrow circumstances. For background information, see archived CRS Report R41104, *Immigration Visa Issuances and Grounds for Exclusion: Policy and Trends*.

[10] INA §212(a)(8) (8 U.S.C. §1182(a)(8)). Although the ground "ineligible for citizenship" suggests a range of criteria linked to the naturalization provisions in Title III of the INA, its actual effect is to bar the entry of individuals who deserted their U.S. military service or evaded the military draft. For background information, see archived CRS Report R41104, *Immigration Visa Issuances and Grounds for Exclusion: Policy and Trends*.

- have been removed previously or were unlawfully present in the United States.[11]

Many grounds of inadmissibility are subject to a discretionary waiver. For example, the INA authorizes immigration officials to waive most inadmissibility grounds to allow noncitizens to enter the United States in a temporary, nonimmigrant status.[12]

Overstays

A nonimmigrant overstay occurs when a foreign national who has been legally admitted to the United States for a specific authorized period[13] remains in the country after that period expires, unless an extension or a change of status has been approved by U.S. Citizenship and Immigration Services. There are two types of overstays that the U.S. Department of Homeland Security (DHS) can identify: those who departed the United States after their authorized periods of stay expired (DHS terms them *out-of-country overstays*[14]) and those for whom their authorized periods of stay have expired and there is no departure record (DHS terms them *suspected in-country overstays*[15]). DHS is authorized to identify and remove noncitizens who fail to depart when their visas or periods of authorized stay expire.

A comprehensive entry-exit system should reduce the number of erroneously counted, suspected in-country overstays. Yet, while a comprehensive entry-exit system is crucial for helping to track overstays, determining the true number of nonimmigrant overstays is not as simple as matching entry and exit data, because individuals can receive extensions of their authorized periods of stay or changes in immigration status while in the United States.

Statutory Requirements

Prior to 1997, the Immigration and Naturalization Service (INS, which performed many immigration-related functions prior to the creation of DHS in 2002) collected entry-exit data manually by obtaining paper copies of travelers' I-94 records.[16] An INS contractor manually keyed in data from the forms. This approach was unreliable because paper forms were not consistently collected (particularly departure forms), forms were not provided to the contractor in a timely manner, and data input errors were widespread.[17] In 1996, Congress mandated that the Attorney General (AG) develop an automated entry-exit system that would collect the records of

[11] INA §212(a)(9) (8 U.S.C. §1182(a)(9)). The reason for and type of removal determine the period of inadmissibility.

[12] Some of these waivers are primarily available to those seeking to come to the United States temporarily. If a noncitizen is seeking to enter the United States to reside here permanently as a legal immigrant, a waiver of inadmissibility grounds is available in narrower circumstances. For more information, see CRS Legal Sidebar LSB10603, *Discretionary Waivers of Criminal Grounds of Inadmissibility Under INA § 212(h)*.

[13] This period may be a fixed amount of time (e.g., six months), or it could be for the duration of a certain activity (e.g., until the end of a student's full course of study).

[14] Out-of-country overstays are "individuals whose departure was recorded after their authorized period of admission expired." DHS, CBP, "Fiscal Year 2020 Entry/Exit Overstay Report," September 30, 2021, p. iii, at https://www.dhs.gov/sites/default/files/2021-12/CBP%20-%20FY%202020%20Entry%20Exit%20Overstay%20Report_0.pdf.

[15] Suspected in-country overstays lack departure records. They may still be in the United States or they may have departed without it being recorded.

[16] An I-94 form is the "DHS Arrival/Departure Record issued to noncitizens who are admitted to the U.S., who are adjusting status while in the United States or extending their stay, among other things." CBP, "I-94 Automation," at https://www.ice.gov/doclib/sevis/pdf/i94-fact-sheet.pdf.

[17] See Department of Justice, Office of the Inspector General, "The Immigration and Naturalization Service's Automated I-94 System," 2001.

noncitizen arrivals and departures. Since then, Congress has amended the system's requirements and deadlines on several occasions, including by adding a biometric requirement in 2001. A timeline of related laws includes the following:

September 1996: The Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA; P.L. 104-208), Section 110, required the AG to develop an automated entry-exit system that would collect records of noncitizen arrivals and departures by September 1998.

October 1998: Two appropriations acts (P.L. 105-259 and P.L. 105-277) amended Section 110 of the IIRIRA to extend the deadline for implementing the entry-exit system to October 1998 for air POEs and to March 2001 for land and sea POEs.

June 2000: The Immigration and Naturalization Service Data Management Improvement Act of 2000 (P.L. 106-215) amended IIRIRA Section 110 to describe the entry-exit system in greater detail and imposed new deadlines of December 2003 for implementation of the entry-exit system at all U.S. air POEs and sea POEs, December 2004 for implementation at the 50 busiest land POEs, and December 2005 for making data from the system available to immigration officers at all POEs.

October 2000: The Visa Waiver Permanent Program Act (P.L. 106-396), Section 205, required the AG to develop and implement a fully automated entry-exit system to collect arrival and departure records for travelers under the Visa Waiver Program (VWP) at sea and air POEs by October 2001.

October 2001: The Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (USA PATRIOT Act; P.L. 107-56), Section 414, required the AG to implement the IIRIRA entry-exit system "with all deliberate speed." The act also directed the AG, in the development of the system, to focus on utilization of biometric technology and tamper-resistant documents. In addition, the law required that the entry-exit system interface with certain law enforcement databases to identify individuals who may pose a threat to national security.

May 2002: The Enhanced Border Security and Visa Entry Reform Act of 2002 (P.L. 107-173), Section 302, required the AG, in developing the integrated entry-exit system, to use the technology standard under the USA PATRIOT Act, establish an arrival and departure database, and make all noncitizen admissibility security databases interoperable (i.e., able to share data with each other).

December 2004: The Intelligence Reform and Terrorism Prevention Act of 2004 (P.L. 108-458), Section 7208, required DHS to develop a plan to accelerate the full implementation of an automated biometric entry-exit system.

August 2007: The Implementing Recommendations of the 9/11 Commission Act of 2007 (P.L. 110-53), Section 711, required DHS to establish a biometric exit system to record the departure of all VWP air travelers by August 2008.

September 2008: The Department of Homeland Security Appropriations Act, 2009 (P.L. 110-329), withheld certain funding for the legacy United States Visitor and Immigrant Status Indicator Technology (US-VISIT) program[18] until DHS planned, piloted, and reported on a biometric air exit program.

[18] In March 2013, the Office of Biometric Identity Management (OBIM) replaced US-VISIT. For more information, see DHS, "Office of Biometric Identity Management Identification Services," at https://www.dhs.gov/obim-biometric-identification-services.

December 2015: The Consolidated Appropriations Act, 2016 (P.L. 114-113), authorized fee increases on L-1 and H-1B visas to provide up to $1 billion for DHS to implement a biometric exit system beginning in FY2017.

Biometrics

As noted, Congress mandated the creation of an entry-exit system, later requiring that the system use biometric identifiers for noncitizens. The biometric entry system has been fully operational since December 2006, though implementing biometric exit has been met with a number of challenges. Among those, the U.S. government does not have a long history of collecting exit data from departing travelers. (In contrast, Schengen Area[19] European states, among other countries, have required for many years that people pass through passport control booths not only upon admission to the Schengen area but also prior to their departure.) As a result, DHS and its predecessor agency have been confronted with inadequate port infrastructure and staffing to implement exit data collection as required by existing law.[20] However, with respect to implementing the biometric exit system, there have been meaningful developments in recent years.

Technology Selection: Facial Recognition Technology

The biometric entry system has been operational since 2006, and it initially relied largely on fingerprints.[21] However, in order to meet the statutory requirements, biometrics need to be taken at both entry and exit. Thus, DHS, and then CBP (which took over the biometric entry-exit mission from DHS in 2013), piloted an array of programs using various biometric technologies (e.g., fingerprints, facial recognition, iris scans)[22] that could work in both the entry and exit environments. CBP determined that facial recognition technology (FRT) was an optimal approach, because comparing digital images can be performed relatively quickly and with a relatively high degree of accuracy.[23] It also does not require physical contact, which CBP contends makes it less invasive for travelers compared to other biometrics such as fingerprints.[24] Further, in certain domains, CBP can use existing infrastructure. For example, at air POEs, CBP can use the secure passport check areas upon entry and at departure gates upon exit.[25] This means

[19] For more information, see European Commission, Migration and Home Affairs, "Schengen Area," at https://home-affairs.ec.europa.eu/policies/schengen-borders-and-visa/schengen-area_en.

[20] Government Accountability Office (GAO), *Border Security: DHS Has Made Progress in Planning for a Biometric Air Exit System and Reporting Overstays, but Challenges Remain*, GAO-17-170, February 2017.

[21] Fingerprints were taken at POEs. GAO, *Information Technology: Homeland Security Needs to Improve Entry Exit System Expenditure Planning*, GAO-03-563, June 2003, p. 9, https://www.gao.gov/assets/gao-03-563.pdf. Today, "foreign travelers who have traveled to the United States previously may no longer need to provide fingerprints, as their identity will be confirmed through the touchless facial biometric process." CBP, "CBP Completes Simplified Arrival Expansion at All US Airports," press release, June 2, 2022, https://www.cbp.gov/newsroom/national-media-release/cbp-completes-simplified-arrival-expansion-all-us-airports.

[22] GAO, *Homeland Security Acquisitions: Leveraging Programs' Results Could Further DHS's Progress to Improve Portfolio Management*, GAO-18-339SP, May 2018, p. 12, https://www.gao.gov/assets/gao-18-339sp.pdf.

[23] DHS, *Transportation Security Administration and U.S. Customs and Border Protection: Deployment of Biometric Technologies*, August 30, 2019, p. 30, https://www.tsa.gov/sites/default/files/biometricsreport.pdf.

[24] DHS, *Traveler Verification Service*, November 14, 2018, p. 3, https://www.dhs.gov/sites/default/files/publications/privacy-pia-cbp056-tvs-february2021.pdf.

[25] GAO, *Facial Recognition Technology: CBP and TSA Are Taking Steps to Implement Programs, but CBP Should Address Privacy and System Performance Issues*, GAO-20-568, September 2020, pp. 2-3.

that DHS can meet its biometric requirement without creating new secure areas of airports. It also means DHS can use private-public partnerships "in which airlines and airports invest in the equipment to collect biometric data."[26] CBP ultimately concluded that FRT was the best biometric solution because it is the least disruptive to travel and trade.[27]

Traveler Verification Service

CBP, in partnership with the Transportation Security Administration, deploys the Traveler Verification Service (TVS) to verify travelers' identities using FRT. TVS is a public-private partnership between the federal government and private airlines, airports, and cruise lines. CBP envisions that TVS "can replace manual checks of travel documents across the travel continuum" at air, land, and sea POEs. TVS currently operates in all 238 international airports in the United States for entry, 44 U.S. airports for exit, 36 U.S. seaports for entry, and all 162 land border locations for pedestrians entering the United States.[28] In addition, all 14 preclearance locations, CBP officers based at airports abroad preclear travelers,[29] use TVS for entry into the United States.[30]

In the context of the biometric entry-exit system, FRT generally operates in two different ways. One is to compare a person's photograph to a gallery or number (i.e., N) of photos, a process known as one-to-many or 1:N matching, to see if there is a potential match. The other is to compare a person's photo to another photo of the traveler to verify an identity, a process known as one-to-one or 1:1 matching. TVS can perform both 1:N and 1:1 matching.[31]

As a first step, TVS typically compares a traveler's *live photographs* (e.g., taken by a gate agent) to a gallery of photographs. The content of these comparison galleries depends on the travel context. For air and sea travelers, CBP uses biographic data (e.g., gender, date of birth, travel document type and number, nationality) obtained from flight and ship manifests via the Advance Passenger Information System (APIS)[32] to gather all associated facial images from DHS holdings (e.g., photographs from U.S. passports, U.S. visas, CBP entry inspections, and other DHS encounters) into the gallery.[33] For pedestrians and vehicle travelers entering the United States by land, the gallery consists of photographs of frequent crossers at that POE. TVS provides a match or no-match result within two seconds. In the case of no match or if DHS does not have any previous photographs of the individual in its holdings, a gate agent can scan the individual's

[26] GAO, *Homeland Security Acquisitions: Leveraging Programs' Results Could Further DHS's Progress to Improve Portfolio Management*, GAO-18-339SP, May 2018, p. 44, https://www.gao.gov/assets/gao-18-339sp.pdf.

[27] GAO, *Facial Recognition Technology*, GAO-20-568, pp. 2-3.

[28] Email communication from CBP to CRS on April 12, 2023.

[29] Preclearance includes the same document inspection, interview, and (as necessary) secondary inspection as normally occurs at U.S. POEs, including customs and agricultural screening. A traveler arriving in the United States following a preclearance inspection may depart the aircraft directly into the arriving airport as with a domestic flight. For more information, see CRS Report R43356, *Border Security: Immigration Inspections at Ports of Entry*, and CPB, "Preclearance," at https://www.cbp.gov/travel/preclearance.

[30] CBP, "Biometrics: Air," https://biometrics.cbp.gov/air.

[31] GAO, *Facial Recognition Technology: CBP Traveler Identity Verification and Efforts to Address Privacy Issues*, GAO-22-106154, July 27, 2022, p. 7, https://www.gao.gov/assets/gao-22-106154.pdf.

[32] APIS is a CBP database containing information about inbound air passengers and crew members. Air carriers submit passenger information to APIS prior to departing on U.S.-bound flights (or prior to arrival in the United States, in certain cases), and CBP uses the data to identify high-risk and inadmissible passengers.

[33] For arriving flights, this gallery is based on the manifests of all flights arriving that day at that airport. DHS, *Traveler Verification Service*, p. 30.

travel document (e.g., passport) and TVS will perform 1:1 matching by comparing the traveler's photograph to the photograph in the travel document. If there is still no match, the traveler's identity can be checked manually by an agent.[34]

Comparing FRT Uses

There are two ways in which FRT algorithms work to compare images:

Matching technology: Algorithms compare a photo of someone claiming a specific identity with a stored image(s) of that known identity to help determine if it is the same person. Uses of these algorithms include unlocking a smartphone and CBP's verification of identities at border security checkpoints.

Probing technology: Search algorithms compare features of a probe[35] photo with all those in a gallery of images. The algorithms can return either a fixed number of the most similar candidates or all candidates with *similarity scores* above a preset threshold for human review. These algorithms may be used for law enforcement purposes such as identifying potential suspect leads from a mugshot database.[36]

Who Is Required to Provide Biometrics?

Under a DHS final rule published in 2009,[37] non-U.S. citizens entering the United States are required to provide biometric data, with the exceptions of Canadian nationals admitted as short-term visitors for business or pleasure, LPRs entering at land POEs or returning from cruises that begin and end in the United States, Mexican nationals with border crossing cards (BCCs),[38] and travelers with other visas explicitly exempted from biometric collection requirements.[39] The 2009 rule means that most categories of arriving noncitizens at air and seaports are required to provide biometric data during primary inspection.

While a relatively small number of categories of foreign nationals are exempted from this 2009 requirement, the exemptions cover the majority of foreign visitors to the United States. This is because the exemptions include the two largest categories of foreign nationals visiting the United States: Canadian short-term visitors and Mexicans with BCCs.[40]

[34] As of July 2022, in the case of no match after 1:1 matching at air arrival, CBP's protocol is to automatically refer the individual to secondary inspection. DHS, Office of the Inspector General, "CBP Complied with Facial Recognition Policies to Identify International Travelers at Airports," July 5, 2022, p. 4.

[35] *Probe* refers to the facial image or template searched against a gallery or database of photos in a facial recognition system.

[36] For more information, see CRS Report R46586, *Federal Law Enforcement Use of Facial Recognition Technology*.

[37] DHS, "United States Visitor and Immigrant Status Indicator Technology Program ('US-VISIT'); Enrollment of Additional Aliens in US-VISIT; Authority to Collect Biometric Data from Additional Travelers and Expansion to the 50 Most Highly Trafficked Land Border Ports of Entry," 74 *Federal Register* 2837.

[38] BCCs (also known as *laser visas*) are short-term, multiple-entry, 10-year nonimmigrant visas that may be issued to certain citizens of Mexico for business or tourism. BCC holders are permitted to visit the United States for up to 30 days and must remain within a zone up to 25 miles from the border in Texas, New Mexico, and California or within 75 miles of the border in Arizona.

[39] The following categories of noncitizens are also exempt: "A-1, A-2, C-3, G-1, G-2, G-3, G-4, NATO-1, NATO-3, NATO-4, NATO-5, or NATO-6 [visa holders]; children under the age of 14; persons over the age of 79; and certain officials of the Taipei Economic and Cultural Representative Office and members of their immediate families seeking admission on E-1 visas." DHS, "Privacy Impact Assessment Update for the United States Visitor and Immigrant Status Indicator Technology Program (U.S.-VISIT) in Conjunction with the Final Rule (73 FR 7743), Enrollment of Additional Alien in US-VISIT," February 10, 2009, https://www.dhs.gov/sites/default/files/publications/privacy_pia_usvisit_addl%20aliens.pdf.

[40] DHS, "U.S. Nonimmigrant Admissions: 2021," p. 7, at https://www.dhs.gov/sites/default/files/2022-07/2022_0722_plcy_nonimmigrant_fy2021.pdf; and International Trade Administration, "National Travel and Tourism Office: International Visitation to and from the United States," https://www.trade.gov/sites/default/files/2021-03/

U.S. citizens are allowed to opt out of biometric entry-exit participation and can instead undergo manual review of travel documents. CBP notifies travelers of this option through physical signs posted at POEs and verbal announcements (including points of entry and of exit). However, there are documented inadequacies with these notices (see the "U.S. Citizens Opt-Out" section).

Entry and Exit

This section outlines the current procedures related to entry and exit and includes the implementation status of the biometric component.[41]

Prior to Air and Sea Arrival

As required by federal law, air and sea carriers must submit passenger manifests to CBP.[42] Via APIS, air and sea carriers are required to provide CBP with electronic copies of passenger and crew manifests prior to the departure of all international flights and voyages to or from the United States. For air carriers, such data must be provided prior to securing aircraft doors. The airline must provide information on who is on the aircraft at the time of departure (not simply who made a reservation for that flight)[43] and is subject to fines if it makes reporting errors.[44] CBP vets inbound passenger manifests against terrorist watchlist data and adds passenger arrival and departure data to the Arrival and Departure Information System (ADIS) biographic database.[45]

Fact%20Sheet%20International%20Visitation%20FINAL.pdf.

[41] This report does not discuss visa issuance or the VWP. For more information about visa issuance, see CRS Report R45938, *Nonimmigrant and Immigrant Visa Categories: Data Brief*. For more information about the VWP, see CRS Report RL32221, *Visa Waiver Program*, and CRS Report R46300, *Adding Countries to the Visa Waiver Program: Effects on National Security and Tourism*.

[42] INA §231 (8 U.S.C. §1221).

[43] DHS, CBP, "Fiscal Year 2020 Entry/Exit Overstay Report," September 30, 2021, p. 5.

[44] INA §231(g) (8 U.S.C. §1221(g)).

[45] ADIS is a DHS database that collects and maintains biographic arrival and departure information on non-U.S. citizens traveling in and out of the United States. ADIS is maintained by CBP and the DHS OBIM and is the main database used by U.S. Immigration and Customs Enforcement (ICE) to identify suspected visa overstayers.

Immigration Inspections at POEs

Primary and Secondary Inspections

Primary inspection (the first level of inspection) consists of a brief interview with an immigration inspector, a cursory check of the traveler's documents, and a query of law enforcement databases. Primary inspections are quick. However, if the inspector suspects that the traveler may be inadmissible under the INA or is in violation of other U.S. laws, the traveler is referred to a secondary inspection. During secondary inspections, travelers are questioned extensively, and travel documents are further examined.[46]

Authority to Conduct Immigration Inspection

The procedures governing inspections of persons applying for admission are described in Title 8, Section 235, of the *Code of Federal Regulations*, which derives its authority from INA Sections 101, 103, 215, 221, and 235. Under INA Section 215, in particular, both citizens and noncitizens are required to present appropriate entry documents, except as otherwise ordered by the President, and (pursuant to Title 8, Section 235.1) to enter through designated POEs. INA Section 211 spells out additional documentary requirements for immigrant admissions. INA Section 287 authorizes immigration officers, among other powers and pursuant to regulations, to interrogate any person believed to be a noncitizen as to the person's right to enter or remain in the United States and to arrest any noncitizen attempting to enter the United States unlawfully.

Prior to 2002, INA Section 103 made the Attorney General responsible for controlling U.S. borders and enforcing these laws. Pursuant to Sections 401-403 of the Homeland Security Act of 2002 (P.L. 107-296), these responsibilities were transferred to the Secretary of DHS.

Air Entry and Exit

DHS fully implemented a biometric entry system for foreign nationals in December 2006, but the system has changed over time. Biometric identity verification is part of the primary inspection upon arrival at U.S. POEs. During primary inspection, CBP officers conduct brief interviews with arriving travelers, examine travel documents, and compare travelers' identities to those in law enforcement databases. Officers also conduct identity verification of the travelers' biographic information (e.g., passport information) and biometrics (e.g., finger scans and/or digital photographs), which are added to the Automated Biometric Identification System (IDENT) database.[47] As noted, U.S. citizens are not required to provide biometrics for entry to the United States.

Starting in 2017, CBP began deploying Simplified Arrival, which, as of June 2022, is operational in all international airports in the United States.[48] Simplified Arrival uses TVS's FRT and is integrated into entry inspections. It biometrically verifies identity and initiates the inspection process. FRT is now the primary biometric used for identity verification, rather than fingerprints.[49]

For air exit, travelers present their boarding passes to gate agents. At airports that have integrated biometric exit capabilities, CBP-owned cameras, typically operated by airlines or airport gate

[46] For more information on primary and secondary inspection, see CRS Report R43356, *Border Security: Immigration Inspections at Ports of Entry*.

[47] IDENT is DHS's primary biometric database. Certain noncitizens' biometric records are added to IDENT upon admission to the United States, when they are apprehended or arrested by a DHS agency, and when they apply for certain immigration benefits.

[48] DHS, *Traveler Verification Service*, p. 30; and CBP, "CBP Completes Simplified Arrival Expansion at All US Airports."

[49] In CBP's announcement of the expansion of Simplified Arrival to all U.S. airports, it stated that "foreign travelers who have traveled to the United States previously may no longer need to provide fingerprints, as their identity will be confirmed through the touchless facial biometric process." CBP, "CBP Completes Simplified Arrival Expansion at All US Airports."

agents, take live photos of travelers at the exit gates . If TVS matches a live photo with a photo in the gallery of photos created from the flight manifest, then the traveler can board the plane.[50] If there is no match, either the gate agent verifies identity manually[51] or the traveler is directed to a CBP officer stationed nearby, who either uses a handheld device to verify the traveler's identity via fingerprints or manually checks the traveler's documents.[52] (For information about what happens to the digital photographs after identity verification, see the "Biometric Data Storage" section.)

Sea Entry and Exit

The way in which biographic data are collected at sea entry and exit is similar to air entry and exit. CBP receives passenger manifests from commercial sea carriers for all arrivals to and departures from the United States. These manifests indicate who is aboard the vessels. Noncitizens arriving at U.S. seaports are required to provide biometric data. As previously noted, FRT is currently deployed at 36 seaports.[53] CBP does not currently use biometrics at sea exit.[54]

Land Entry

Implementing a land entry-exit system is more difficult than in the air and sea environments for a variety of reasons. In the land environment, except for travelers on private rail or bus lines and drivers and occupants of commercial vehicles, there are not manifests or reporting that may be sent to CBP in advance of arrival or departure. And, even in these instances, reporting is incomplete. CBP sometimes receives manifests from private rail or bus lines, but providing them is voluntary for these transportation providers (in contrast to air and sea carriers, which are required to send manifest data).[55] Many travelers also cross the border as pedestrians or in personally owned vehicles.

As of July 2022, CBP has deployed FRT in all land POEs for arriving pedestrians.[56] It is currently piloting FRT for travelers entering the United States in personally owned or commercial vehicles.[57] For personally owned vehicles, cameras in the inbound lanes take photographs of the occupants' faces (as the vehicle slows to under 20 miles per hour) and matches them against a TVS gallery of recent travelers.[58] Commercially owned vehicles are required to submit manifests in advance (similar to air and sea entry). Facial images are compared to a gallery of historical photos that DHS has of individuals listed on the manifests (as occurs in the air and sea environments).[59]

[50] DHS, *Traveler Verification Service*, p. 32.

[51] GAO, *Facial Recognition Technology*, GAO-22-106154, p. 14.

[52] DHS, *Traveler Verification Service*, p. 32.

[53] Email communication from CBP to CRS on April 12, 2023.

[54] DHS, *Traveler Verification Service*, p. 43; and GAO, *Facial Recognition Technology*, GAO-22-106154, p. 3.

[55] DHS, *Traveler Verification Service*, p. 33.

[56] GAO, *Facial Recognition Technology*, GAO-22-106154, p. 3.

[57] GAO, *Facial Recognition Technology*, GAO-22-106154, p. 3.

[58] DHS, *Traveler Verification Service*, p. 34. It is unclear how U.S. citizens can opt out of this technical demonstration, but CBP does note that is "does not retain photos of U.S. citizens."

[59] DHS, *Traveler Verification Service*, p. 34.

Land Exit

According to CBP, "the collection of departure information in the land environment is more difficult than in the air and sea environments due to the major physical, logistical, and operational obstacles involved with electronically collecting an individual's biographic and biometric data."[60] As of July 2022, CBP was testing a biometric land exit process (using FRT) for travelers departing the United States by foot and in vehicles, using TVS for the matching process.[61] However, as of April 2023, there are no current biometric land exit pilots.[62]

Regarding the collecting of biographic data in the land environment, the exit system currently operates differently at the northern and southern borders. At the northern border, the United States and Canada have an agreement, entitled *Beyond the Border*, to exchange biographic entry data of those crossing between the two countries by land.[63] Thus, an entry into Canada is recorded as an exit from the United States and vice-versa. CBP can use these data to resolve cases where, for example, a traveler enters the United States by air or sea but departs by land to Canada.[64]

The United States does not have a similar agreement with Mexico at the southern border. Instead, CBP is able to resolve unknown statuses of previous entries with re-entries. In other words, in the absence of exit data, CBP would close the loop on a previous entry if and when it records a re-entry by the same person.[65]

Policy Issues

Completing the Biometric Exit System

While the biographic and biometric *entry* systems are complete and operational at all U.S. air, sea, and land POEs, the same cannot be said of the biographic and biometric *exit* systems. The exit system is in varying degrees of completion depending on mode of travel (i.e., air, land, or sea) and the type of information gathered (i.e., biographic vs. biometric data). See **Table I** for an outline of the status of the biometric and biographic entry-exit system by mode of travel.

In terms of air exit, biographic data are captured on all air passengers exiting the United States, because the airlines are required to submit passenger manifests for international flights via APIS. As of July 2022, the capture rate of biometric data at air exit for in-scope travelers on participating flights is approximately 80%.[66] CBP's previously stated goal was 97%, but it is no longer pursuing that goal. CBP reported to GAO that the 97% goal is currently unattainable because it relies on private-public partnerships. Participation by airlines is voluntary for biometric data and CBP wants to maintain positive relationships with those partners.[67] CBP does not have the resources to be at every departure gate and must rely on airline partners. In addition, CBP's

[60] DHS, CBP, "Fiscal Year 2020 Entry/Exit Overstay Report," September 30, 2021, p. 6.

[61] DHS, *Traveler Verification Service*, p. 35; and GAO, *Facial Recognition Technology*, GAO-22-106154, p. 3.

[62] Email communication from CBP to CRS on April 12, 2023.

[63] The agreement was signed in 2011. Initially, the two countries shared information only about third-country nationals (including permanent residents of Canada and lawful permanent residents of the United States). In 2019, the agreement expanded to include Canadian and U.S. citizens.

[64] DHS, CBP, "Fiscal Year 2020 Entry/Exit Overstay Report," September 30, 2021.

[65] However, this would not provide CBP with the date of the previous departure.

[66] GAO, *Facial Recognition Technology*, GAO-22-106154, p. 14.

[67] GAO, *Facial Recognition Technology*, GAO-22-106154, p. 15.

operational testing found that FRT is not always used for air exit due to "factors such as camera outages, incorrectly configured systems at boarding gates, and airline agents' decisions to exclude certain categories of people, such as families or individuals using wheelchairs, to speed up the boarding process."[68] (In those cases, gate agents rely on manually checking traveler documents.) CBP will not "take further action to improve the rate" because it thinks the rate will gradually increase as airline and airport employees get more training with the technology and travelers get more comfortable and familiar with it.[69]

Regarding international departures at sea POEs, biographic data on travelers are collected through passenger manifests, similar to air exit. CBP does not capture biometrics at sea exit as of the date of this report.[70] While "CBP has no current biometric demonstrations deployed for cruise lines in the sea exit environment," it plans to do so in the future.[71]

Regarding land exit, the collection of biographic data at the northern border is accomplished through the *Beyond the Border* partnership with Canada (discussed previously in the "Land Exit" section). Neither biographic nor biometric data are systematically collected upon departure at the southern land border.

Table 1. Status of the Biographic and Biometric Entry-Exit System

Mode of Travel	Biographic	Biometric
Air entry	Complete	Complete
Air exit	Complete	Approximately 80% of in-scope travelers
Sea entry	Complete	Complete
Sea exit	Complete	No current pilots
Land entry—pedestrians	Complete	Complete
Land entry—vehicles	Complete	Piloting
Land exit—northern border pedestrians	Complete	No current pilots
Land exit—northern border vehicles	Complete	No current pilots
Land exit—southern border pedestrians	Incomplete; using re-entry data	No current pilots
Land exit—southern border vehicles	Incomplete; using re-entry data	No current pilots

Sources: DHS, *Traveler Verification Service*, DHS/CBP/PIA-056, November 14, 2018, https://www.dhs.gov/sites/default/files/publications/privacy-pia-cbp056-tvs-february2021.pdf; and GAO, *Facial Recognition Technology: CBP Traveler Identity Verification and Efforts to Address Privacy Issues,* GAO-22-106154, July 27, 2022, https://www.gao.gov/assets/gao-22-106154.pdf; email communication from CBP to CRS on April 12, 2023.

Notes: Sea entry and exit refers to cruise passengers, not crewmembers. For information on crewmembers, see DHS, *Traveler Verification Service*, p. 42.

[68] GAO, *Facial Recognition Technology*, GAO-22-106154, p. 14.

[69] GAO, *Facial Recognition Technology*, GAO-22-106154, p. 15.

[70] DHS, *Traveler Verification Service*, p. 43; and GAO, *Facial Recognition Technology*, GAO-22-106154, p. 3.

[71] DHS, *Traveler Verification Service*, p. 43.

Accuracy of Traveler Verification Service

CBP's internal testing found that TVS exceeded its accuracy goals.[72] In contrast to other uses of FRT that can provide numerous possible matches (e.g., FRT used by police to generate potential investigative leads), TVS is a binary (match or no match) technology. As such, TVS can produce two types of mistakes: false positives (i.e., identifying a match where there is none) and false negatives (i.e., failing to identify a match when there is one). According to CBP internal analysis, TVS's false positive rate is 0.0103%. (It did not report the false negative rate.[73]) The accuracy rate is affected by a number of factors, including the size and composition of the gallery against which a face is compared.[74] Notably, the TVS galleries are relatively small because they are created for a specific flight, ship, or POE.

False positives pose potential security risks because they may allow travelers to enter the United States who should have been denied entry. False negatives potentially pose less of a security risk, though they present unique challenges. In the event of a non-match, a traveler's identity is checked manually, and the technology's error can be corrected—although it could delay or disrupt travel.

A National Institute of Standards and Technology study found that FRT algorithms' accuracy rates can vary by demographic factors such as age, sex, and race.[75] However, when examining TVS's accuracy, DHS reported that "CBP analysis found a negligible effect in regards to biometric matching based on citizenship, age, or gender."[76] (CBP does not collect race/ethnicity data, so it uses citizenship as a proxy.)

Biometric Data Storage

CBP stores photographs of foreign nationals for 14 days in the Automated Targeting System (ATS)[77] Unified Passenger Module. After 14 days, photographs are transmitted to IDENT, where they are retained for up to 75 years. In contrast, photographs of U.S. citizens are to be immediately deleted after the matching process. All photographs are to be purged from the TVS cloud after 12 hours, regardless of citizenship status. Private partners, such as air carriers, are not allowed to store travelers' photographs, nor can they use that data for their own business purposes.[78]

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[72] GAO, *Facial Recognition Technology*, GAO-22-106154, p. 14.

[73] DHS, *Transportation Security Administration and U.S. Customs and Border Protection: Deployment of Biometric Technologies*, p. 30.

[74] For more information, see the "Accuracy and Interpretation of Results" section of CRS Report R46586, *Federal Law Enforcement Use of Facial Recognition Technology*.

[75] Patrick Grother, Mei Ngan, and Kayee Hanaoka, *Face Recognition Vendor Test (FRVT) Part 3: Demographic Effects*, U.S. Department of Commerce, National Institute of Standards and Technology, December 2019, at https://nvlpubs.nist.gov/nistpubs/ir/2019/NIST.IR.8280.pdf.

[76] Grother, Ngan, and Hanaoka, *Face Recognition Vendor Test (FRVT) Part 3*. See also GAO, *Facial Recognition Technology*, GAO-22-106154, p. 16; and Patrick Grother et al., "Face Recognition Vendor Test (FRVT) Part 7: Identification for Paperless Travel and Immigration," National Institute of Standards and Technology, July 2021, https://nvlpubs.nist.gov/nistpubs/ir/2021/NIST.IR.8381.pdf.

[77] ATS is a CBP database of incoming and certain outbound cargo and persons. Advanced screening information is added to the ATS and checked against intelligence data from CBP's National Targeting Center and other intelligence and law enforcement databases to produce a risk-based score. Travelers above a certain ATS threshold are generally selected for secondary inspection.

[78] GAO, *Facial Recognition Technology: CBP Traveler Identity Verification and Efforts to Address Privacy Issues*,

On June 13, 2019, a few days after CBP announced a breach of data held by one of its subcontractors, over 20 House Members signed a letter to then-Acting DHS Secretary McAleenan expressing concern about CBP's use of FRT. In addition, during the July 2019 and February 2020 House Committee on Homeland Security hearings about DHS's use of FRT, many Members expressed concerns about data security and liability.[79] Among other things, the letter inquired about the nature of the contracts with private partners, the legal liability of the private partners, and how CBP audits partner systems to ensure that they are purging the photographs consistent with the designated timelines (see above).[80]

Auditing Private Partners

Private companies and contractors that partner with CBP have access to travelers' personal data and must follow CBP's requirements regarding data collection, privacy, and security. To ensure this, CBP can conduct audits of these partners. However, during a 2022 House Committee on Homeland Security subcommittee hearing, some Members raised concerns about the lack of robust auditing of private partners and contractors.[81] According to testimony by the director of GAO's Homeland Security and Justice team:

> As of May 2020, CBP had audited one airline partner and did not have a plan to ensure all partners were audited. In July 2022, CBP reported that it has conducted five assessments of its air partners and has three additional assessments underway. These are positive steps to help ensure that air traveler information is safeguarded. However, CBP should also audit other partners who have access to personally identifiable information, including contractors and partners at land and sea ports of entry.[82]

U.S. Citizens Opt-Out

As mentioned, U.S. citizens are permitted to opt out of biometric confirmation of their identities when entering or exiting the United States and can instead undergo manual review of travel documents. CBP notifies travelers of this option through physical signs posted at POEs and verbal announcements. It also provides an FAQ sheet upon request, and there is information about TVS on CBP's website.

In the aforementioned letter to DHS in 2019, some policymakers expressed concern that CBP may not provide U.S. citizens with adequate notice about TVS or explain opt-out procedures clearly.[83] In addition, GAO found in 2020 that

> CBP's privacy notices to inform the public were not always current or complete, provided limited information on how to request to opt out of facial recognition, and were not always

GAO-22-106154, p. 8.

[79] U.S. Congress, House Committee on Homeland Security, *About Face: Examining the Department of Homeland Security's Use of Facial Recognition and Other Biometric Technologies*, 116th Cong., 1st sess., July 10, 2019; and U.S. Congress, House Committee on Homeland Security, *About Face: Examining the Department of Homeland Security's Use of Facial Recognition and Other Biometric Technologies: Part II*, 116th Cong., 2nd sess., February 6, 2020.

[80] Letter from 23 Members of Congress to Kevin McAleenan, former Acting Secretary of Homeland Security, June 13, 2019, https://wild.house.gov/sites/wild.house.gov/files/CBP%20Facial%20Recognition%20Ltr.%20final.%20.pdf.

[81] U.S. Congress, House Committee on Homeland Security, Subcommittee on Border Security, Facilitation, and Operations, *Assessing CBP's Use of Facial Recognition Technology*, 117th Cong., 2nd sess., July 27, 2022, https://www.congress.gov/117/chrg/CHRG-117hhrg49891/CHRG-117hhrg49891.pdf.

[82] GAO, *Facial Recognition Technology*, GAO-22-106154, , highlights.

[83] Letter from 23 Members of Congress to Kevin McAleenan, June 13, 2019.

> available. In particular, we identified limitations related to the completeness of information in CBP's online resources and call center, outdated signs at airports, information on opting out included in privacy notices, and placement of signs at ports of entry.[84]

Since then, CBP has taken steps to improve opt-out signage. According to a 2022 GAO report:

> CBP has ensured that privacy notices contain complete information and is taking steps to ensure signage is more consistently available, but needs to complete its efforts to distribute updated signs to locations where FRT is used.[85]

In addition to the adequacy of opt-out notices, some observers take issue with the fact that U.S. citizens are being included in the collection of biometric data at entry or exit at all. They argue that Congress did not specifically authorize the collection of biometric data from U.S. citizens. The statutory requirements of the entry-exit system specify collecting data on foreign nationals.[86]

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[84] GAO, *Facial Recognition Technology*, GAO-22-106154, pp. 8-9. While this report was published in 2022, this quote is referencing findings from a 2020 investigation.

[85] GAO, *Facial Recognition Technology*, GAO-22-106154, pp. 8-9.

[86] For example, see Heather Murphy, "Whatever Happened to Those Self-Service Passport Kiosks at Airports?," *New York Times*, October 5, 2022, https://www.nytimes.com/2022/10/05/travel/customs-kiosks-facial-recognition.html.