The Evolution of Border Controls as a Mechanism to Prevent Illegal Immigration

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Executive Summary

The challenge of effective border control in the United States has grown dramatically over the past few decades. Each year, over 400 million travelers enter the country through official entry points and hundreds of thousands of people cross the border illegally. Faced with enormous political pressure to stop illegal immigration and, especially since September 11, 2001, to prevent the entry of potential terrorists, the US government has devoted ever more resources to enforcing its border policies. These resources have funded a range of innovations in border systems and technologies designed to screen passengers more effectively at official entry points while preventing people from crossing borders between these entry points.

Efforts to prevent entries at unauthorized locations have focused primarily on the US-Mexico land border, where the overwhelming majority of unauthorized entries occur, and have included the construction of physical fencing; an extraordinary array of radars, ground sensors, and unmanned aerial vehicles designed to detect border crossers and dispatch border agents to apprehend them; and a five-fold increase in the number of agents deployed at the Southwest border over a period of less than two decades. Some of the policies have been difficult to implement, however. In particular, one of the most ambitious recent attempts to create a "virtual" fence at the Southwest border — a high-tech marriage of camera towers, sensors, and aerial surveillance known as SBI*net* — proved too expensive, vulnerable to technical failures, and insufficiently sensitive of the requirements of border patrol agents on the ground, and was subsequently canceled.

Substantial spending on securing the United States' physical borders has pushed up costs and risks for migrants attempting to cross the border and has undoubtedly reduced illegal immigration to some extent. But virtual fence technologies have their limits. This is because in order to be effective they must be backed up with sufficient personnel to apprehend border crossers after they are detected. Hiring additional agents is expensive, but smugglers can engage "decoy" border crossers to tie up these personnel at relatively low cost. Indeed, one byproduct of tighter border controls has been the increasing sophistication of smugglers trying to facilitate illegal entry, including by diverting flows to less accessible areas or by circumventing enforcement measures at official ports of entry. In other words, border-management programs must follow a constantly evolving and moving target, but doing this can be extremely costly.

The challenge of managing ports of entry has also grown, spurring the creation and development of automated screening technologies, integrated databases to give immigration officials access to law enforcement information and monitor entries and exits, and systems to collect more data on travelers before they reach the country. These systems aim to provide more intensive screening and to facilitate international trade and the movement of people, leveraging new technologies to accomplish both goals.

Registered-traveler programs at the Northern and Southern land borders and at US airports, for example, have been a showpiece of border-control modernization, expediting the movement of low-risk, prescreened travelers through passport inspection. They have been implemented with relative ease. Implementation has proved much more difficult for the ambitious US-VISIT entry-exit system, however. As initially envisioned this system would record arrivals and departures in order to identify visa overstayers. Accurate and complete data collection is essential for the program to work; but despite legislation mandating the completion of a functioning entry-exit system, full implementation remains a distant goal. In particular, secure collection of biometric exit data at land borders and airports may be technically possible, but would be hugely expensive and politically difficult. To date, therefore, US-VISIT's contribution to immigration law enforcement has been marginal and has come at a relatively high price.

Finally, US policymakers have designed various systems to collect more extensive data on incoming travelers before they reach the United States. The Visa Waiver Program (VWP), which allows visa-free travel for nationals of low-risk countries, provides an interesting illustration. The program creates substantial savings on consular processing, but has raised political concerns about security and visa-overstaying. Congress has, therefore, required the Department of Homeland Security (DHS) to collect biographical data from travelers at least 72 hours before departure, to develop biometric capabilities to verify that travelers leave the country, and negotiate information sharing agreements with VWP member countries.

Congress has a history of setting immigration enforcement goals that are not always realistic or feasible, even with the billions of dollars that lawmakers have been willing to appropriate for the purpose. However, political support remains strong for US-VISIT entry-exit capability and for high levels of border patrol agents supported with virtual-fence technologies. These policies have to date met varying levels of success in reducing illegal immigration; and it is far from clear whether they have been worth their extraordinary cost or whether resources could be more productively employed elsewhere. Given that illegal immigration is essentially a function of labor demand, more persistent efforts to prosecute law-breaking employers could probably do much more to reduce illegal immigration than increasing the already high spending on border fences, physical or virtual.

I.   Introduction

The world's states exercise territorial sovereignty by adopting policies and enacting laws that require international travelers to pass through official ports of entry. States have established coast guards and border guards to insure that international passengers and imported cargo enter their territory at official border crossing points where state officials can conduct inspections and decide whether to authorize entry. Of course, achieving absolute border control, whereby no single individual crosses into a state without that state's authorization, is impossible and the only nations that have come close to such control were totalitarian, with leaders who had no qualms about imposing border control with shoot-to-kill orders.

Since the early 1990s, the US government has endeavored to enforce its border-control policies by devoting ever more resources to stop illegal migration at its borders and, especially since the September 11, 2001 terrorist attacks, to stop the entry of potential terrorists. For example, the US Congress mandated the construction of 670 miles of border fencing and barriers when it passed the *Secure Fence Act of 2006*, in order to establish "operational control over the international land and maritime borders of the United States."[1] In this law, Congress defined "operational control" as "the prevention of all unlawful entries into the United States, including entries by terrorists, other unlawful aliens, instruments of terrorism, narcotics, and other contraband." By including "all" unlawful entries in this definition, Congress set a goal that is impossible for a nontotalitarian state to even come close to achieving. In 2007, border-control professionals within the US Department of Homeland Security (DHS) added the modifier "effective" to "operational control" and articulated a more realistic strategic goal.[2] When asked during congressional testimony in June 2010 for a definition of "securing the border," US Border Patrol Chief Michael Fisher said that the "ultimate objective is to be able to reduce the likelihood that dangerous people and dangerous capabilities enter the between ports of entry (POE). What you didn't hear … is sealing the border."[3] While states

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1   *Secure Fence Act of 2006,* Public Law 109–36, Section 2(b).
2   Testimony of Ronald Colburn, Deputy Chief, US Border Patrol, before the Senate Committee on Finance*, Border Insecurity, Take Three: Open and Unmonitored,* 110th Cong., 1st sess., September 27, 2007. http://finance.senate.gov/hearings/hearing/?id=ddb0a7f5-cd10-cc98-6ed8-cbdba452d332.
3   Testimony of Michael Fisher before the House Homeland Security Committee, Subcommittee on Management, Investigations and Oversight and the Subcommittee on Border Maritime and Global Counterterrorism, *SBInet*: *Does it Pass the*

may have a policy objective of complete border control, border-control professionals from all liberal democratic states, including the United States, operate within constraints imposed by the economic realities of cross-border trade and travel as well as respect for the human rights of anyone they may encounter.[4]

In the wake of the September 11 terrorist attacks, the Bush administration endeavored to create a "smart border," which "must integrate actions abroad to screen goods and people prior to their arrival in sovereign US territory … allow extensive prescreening of low-risk traffic, thereby allowing limited assets to focus attention on high-risk traffic [and] use … advanced technology to track the movement of cargo and the entry and exit of individuals."[5] In a dramatic illustration of the administration's agenda, Richard Falkenrath, former deputy assistant to the president and deputy Homeland Security advisor, drew an analogy likening the revolution in military affairs of the 1990s to the current "revolution in border security."[6] This border security revolution largely consists of the Department of Homeland Security using technology as a "force multiplier" to increase the capabilities of officers tasked with controlling the country's borders, as well as embracing a strategy of "pushing borders out"[7] beyond US territorial boundaries by stationing CBP officers in airports abroad and by requiring electronic submission of passenger manifests in advance of departure to the United States.[8] Indeed, as expanding e-government and advance submission of electronic data enable the preclearance of passengers and cargo, thereby reducing the necessity for inspection at territorial boundaries, borders may increasingly exist, de facto, in cyberspace, becoming what some US border security officials call "virtual borders."[9]

The strategic emphasis on technology clearly has had consequences for all those who travel to the United States as well as for the US taxpayer. Border-control technology programs with billion-dollar budgets have increased the number of tools available to border-control authorities to control cross-border flows of people and reduce illegal migration. But system implementation, particularly of the two biggest systems, the Secure Border Initiative network (or SBI*net*) and the automated biometric entry-exit system, US-VISIT, has been far from complete. SBI*net* failed to meet policymaker expectations in achieving its immigration law enforcement mission, and it remains to be seen whether US-VISIT will clear that hurdle.

This report considers the challenges of securing US borders and the approach that US policymakers have taken in recent years. These efforts have taken several forms. On the one hand, they have included fences and technology deployment to prevent unauthorized entries outside of official ports of entry — particularly at the 2,000-mile US-Mexico border. On the other hand, automated passenger screening technologies, data collection systems, and international agreements on data sharing and visa-free travel have been implemented with the goal of more quickly and efficiently processing greater volumes of passenger information. This report examines the development of border-control

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Border Security Test?, 111th Cong., 2nd sess., June 17, 2010, http://chsdemocrats.house.gov/hearings/index.asp?ID=259.

4   For further elaboration of this point, see James F. Hollifield, *Immigrants, Markets, and States: The Political Economy of Postwar Europe* (Cambridge, MA: Harvard University Press, 1992); Rey Koslowski, *Migrants and Citizens: Demographic Change in the European States System* (Cornell University Press, 2000).

5   The White House, "Fact Sheet: Border Security," January 25, 2002 (accessed January 27, 2005), http://georgewbush-whitehouse.archives.gov/news/releases/2002/01/20020125.html.

6   Response to Rey Koslowki's question at "Transatlantic Homeland Security? European Approaches to 'Total Defense,' 'Societal Security' and Their Implications for the US," (Center for Transatlantic Relations, Paul H. Nitze School of Advanced International Studies, Johns Hopkins University, February 19, 2004).

7   For an early discussion of the "pushing borders out" strategy, see Stephen E. Flynn, "America the Vulnerable," *Foreign Affairs* 81, no. 1 (2002): 60-74.

8   See Rey Koslowski, "Homeland Security and the Globalization of Border Controls," (paper presented at the International Studies Association meeting, Montreal, March 17-20, 2004); and Keith Cozine, "Transgovernmental Networks as a Tool to Combat Terrorism: How ICE Attaches Operate Overseas to Combat Terrorist Travel," (PhD dissertation, Rutgers University, January 2010).

9   Department of Homeland Security (DHS) US-VISIT Office, "Request for Proposals for US-VISIT Program Prime Contractor Acquisition," RFP no. HSSCHQ-04-R-0096, November 28, 2003.

technologies, their implementation and effectiveness, and concludes with a discussion of the opportunity costs of those border-control technologies. The scope of this report is limited to the role of border controls in immigration law enforcement and does not examine the counterterrorism mission to any significant extent.

II.   The Challenges of Border Security

The Department of Homeland Security (DHS) was established in 2003 out of the former US Immigration and Naturalization Service (INS), the US Customs Service, the US Coast Guard, and other federal agencies to increase transportation and border security, minimize the risk of future terrorist attacks, and prepare to respond to any attacks that may occur. Within DHS, US Customs and Border Protection (CBP) has the task of intercepting terrorists, enforcing immigration law, and collecting customs duties at 342 air, sea, and land ports of entry and preclearance stations[10] and between ports of entry along the 5,525-mile US-Canadian border and the 1,989-mile US-Mexican border. A separate division of CBP, the Office of Field Operations, manages screening at ports of entry. The US Border Patrol, a division of CBP, is responsible for the border between official points of entry and has the "strategic goal to establish and maintain effective control of the borders of the United States [defined as the ability to] to: detect an illegal entry; identify and classify the entry and determine the level of threat involved; respond to the entry; and bring the event to a satisfactory law enforcement resolution."[11]

The challenges faced by officers attempting to meet these border security goals and implement immigration policies have grown dramatically thanks to the increasing cross-border flows of goods, people, and money, and have been complicated by the overlay of counterterrorism missions since September 11, 2001.

A.   Legal and Illegal Entries to the United States

DHS estimates that there were about 10.8 unauthorized immigrants in the United States in 2009, while the Pew Hispanic Center reports a mid-range estimate of 11.1 million (see Table 1) — between one-quarter and one-third of the total US international migrant population of 38 million.[12] The majority of the unauthorized (60 percent in 2009) are Mexicans,[13] many of whom arrive by crossing the United States' Southwestern border. Approximately 30 percent to 40 percent of the unauthorized immigrants in the United States, however, are estimated to have entered legally but overstayed their visas.[14] It is very difficult to determine the flows of illegal migration into the country, other than noting changes in the stock of the unauthorized population, which roughly doubled since the mid-1990s. The Pew Hispanic Center estimates average annual inflows of 850,000 from 2000-2005; 550,000 from 2005-2007; and 300,000 from 2007-2009.[15]

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10 According to US Customs and Border Protection (CBP), there are 327 official ports of entry in the United States and 15 preclearance stations in Canada and the Caribbean; see CBP, "Locate a Port of Entry – Air, Land, or Sea," (accessed January 21, 2010), www.cbp.gov/xp/cgov/toolbox/ports/.

11 Colburn testimony before the Senate Committee on Finance, *Border Insecurity, Take Three: Open and Unmonitored.*

12 According to the Census Bureau American Community Survey (ACS), 2008; see Aaron Terrazas and Jeanne Batalova, "Frequently Requested Statistics on Immigrants and Immigration in the United States" (Washington DC: Migration Policy Institute, 2009), www.migrationinformation.org/USfocus/display.cfm?ID=747.

13 Jeffrey S. Passel and D'Vera Cohn, *U.S. Unauthorized Immigration Flows Are Down Sharply Since Mid-Decade* (Washington, DC: Pew Hispanic Center, 2010), http://pewhispanic.org/reports/report.php?ReportID=126.

14 See, for example, Pew Hispanic Center, "Modes of Entry for the Unauthorized Migrant Population," (fact sheet, May 22, 2006), http://pewhispanic.org/factsheets/factsheet.php?FactsheetID=19.

15 Passel and Cohn, *U.S. Unauthorized Immigration Flows.*

Table 1. Estimates of the Unauthorized Immigrant Population (in Millions), 1997-2009

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
DHS	5.9	6.1	6.5	7.0	N/A	N/A	N/A	N/A	10.5	11.6	11.8	11.6	10.8
Pew	--	--	--	8.4	9.3	9.4	9.7	10.4	11.1	11.3	12.0	11.6	11.1

Source: Data for 1997-2000 from *Estimates of the Unauthorized Immigrant Population Residing in the United States: 1990 to 2000* Table C, P (Washington, DC: Office of Policy and Planning, US Immigration and Naturalization Service, undated): 10; data for 2005-2009, *Estimates of the Unauthorized Immigrant Population Residing in the United States* (Washington, DC: DHS Office of Immigration Statistics, various years); Jeffrey S. Passel and D'Vera Cohn, *U.S. Unauthorized Immigration Flows Are Down Sharply Since Mid-Decade* (Washington, DC: Pew Hispanic Center, 2010.)

One of the greatest challenges facing DHS is the enormous volume of *authorized* travelers passing in and out of the country every day. More than 39 million foreign nationals entered the United States with a nonimmigrant visa or under the Visa Waiver Program in 2008 (this number fell somewhat to 36 million in 2009), the vast majority of whom were visitors coming for business or pleasure, for stays usually limited to 90 days (see Appendix 1). But the challenge to border-control officials is not just foreign nationals. In order to maintain security, officers must inspect all travelers, including US citizens. Their number has consistently exceeded 400 million over the past decade (see Appendix 2).[16]

One way to relieve the strain is to refrain from inspecting every individual who enters the country. Before January 31, 2008, US citizens could cross into the country at land borders with an oral declaration of citizenship and CBP officers could simply wave them through without checking travel documents. Given that roughly one-third of land border entries are US citizens (see Table 4), the reversal of this policy, mandated by the *Implementing Recommendations of the 9/11 Commission Act of 2007,* increased security at the cost of slowing throughput. This was especially pronounced at crossings with daily commuters and frequent travelers whom officers might recognize, as well as at peak times when officer discretion was more often used to clear backups.

Given the intense media attention paid to illegal migration, border controls are often exclusively understood in terms of the movement of people, but inspection of international travelers is only one part of the inspection process. CBP officers must also examine conveyances including automobiles, ships, commercial and private aircraft, as well as millions of sealed shipping containers arriving by truck, rail, and ship (see Appendix 3). At many ports of entry (e.g. along the Montana and North Dakota borders with Canada), CBP may be much more occupied with the plants, animals, and microorganisms (e.g. mad cow disease) crossing the border than the people.

B.   *Increasing Resources for Border Security*

The sheer volume of travel to and from the United States creates an enormous administrative challenge for border authorities. Successive administrations and Congress have authorized increased budgets for CBP staffing in order to meet this challenge, particularly in recent years. Increasing staffing has been accompanied by greatly increased spending on supporting technologies such as radar, sensors, and unmanned aerial vehicles designed to detect border crossers and dispatch border agents to apprehend them. These technologies are discussed in some detail later in this report.

The CBP budget for border security and control between ports of entry more than doubled over the past five years, from $1,671 million in fiscal year (FY) 2005 to $3,587 million in FY 2010 (see Table 2).

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16   From a border security standpoint, it is the increasing numbers of international travelers that present a challenge to border-control officials attempting to identify dangerous or unauthorized individuals within such growing travel flows. The 9/11 hijackers were not immigrants to the United States. Most of them were tourists. Of the 19 hijackers who attacked the World Trade Center and the Pentagon, 17 entered on tourist visas, one on a business visa, and one on a student visa.

This increased funding has enabled CBP to increase staffing for inspections and trade facilitation at ports of entry by over 3,600 full-time equivalents (FTEs) and increase staffing for border security and control between ports of entry by over 11,000 FTEs.[17] As of July 2010, CBP reported staffing levels of 21,058 CBP Officers and 20,119 Border Patrol agents, 17,244 of whom were stationed at the Southwest border.[18] Border Patrol agent staffing increased by 15 percent overall, from FY 2008 to FY 2009,[19] and by 2009, patrol agents between ports of entry at the Southwest border had increased almost fivefold since the early 1990s (see Figure 1).

Table 2. CBP Budget for Border Security (millions), FY 2005-2011

	2005	2006	2007	2008	2009	2010	2011 (Request)
Border Security inspections & trade facilitation at POEs	$1,683	$1,605	$1,813	$2,001	$2,595	$2,750	$2,918
Border security/control between POEs	$1,671	$2,115	$2,276	$3,002	$3,471	$3,587	$3,575

Source: DHS, *DHS Budget-in-Brief*, various years.

Figure 1. Border Patrol Agents Between Ports of Entry on US Southwest Border, 1992-2010.
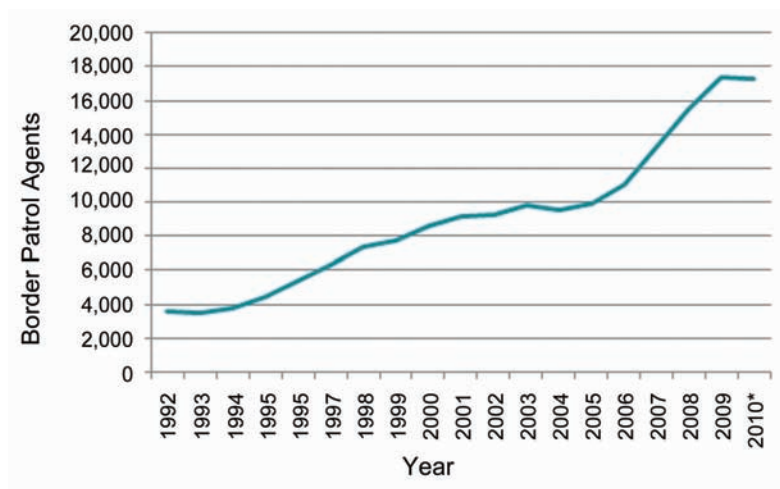
Source: CPB Commissioner Alan Bersin, presentation at the Migration Policy Institute, October 15, 2010.

Over five years, the entire CBP workforce increased nearly 50 percent, from approximately 40,000 in 2005 to 58,575 in 2010; but these staffing increases have been relatively greater for the Border Patrol than for the Office of Field Operations and CBP officers at ports of entry. These staffing increases have produced a CBP workforce that seems very large. However, if one also considers the workforce of US Immigration and Customs Enforcement (20,876) and US Citizenship and Immigration Services

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17 DHS, *Budget-in-Brief*, various years, www.dhs.gov/xabout/budget.
18 CBP staffing also includes 2,394 agriculture specialists and 1,212 air and marine agents; see CBP, "Snapshot: A Summary of CBP Facts and Figures," (accessed January 21, 2011), www.cbp.gov/linkhandler/cgov/about/accomplish/snapshot.ctt/snapshot.pdf.
19 CBP, "Securing America's Borders: CBP Fiscal Year 2009 in Review," (fact sheet, November 24, 2009). www.cbp.gov/xp/cgov/newsroom/news_releases/archives/2009_news_releases/nov_09/11242009_5.xml.

(10, 878) — for a total of 80,329 DHS employees[20] devoted to border security and immigration — this number pales in comparison to the 400,000 border guards of the 27 European Union (EU) Member States.[21]

C.   Chasing a Moving Target?

Even the best-financed, best-staffed border security organizations must face a challenging reality: the objects of border control are not static. Illegal border crossers are people with a will of their own, abundant ingenuity, and the capacity to get help from others. Frontline border-control officers often compare their task to squeezing a balloon: If you squeeze one end, it expands at the other. Clamping down at one part of the border drives illegal migrants to attempt to cross elsewhere.

For example, Operation Hold the Line in El Paso and Operation Gatekeeper in San Diego (initiated in 1993 and 1994, respectively) stepped up controls by stationing Border Patrol agents every 100 yards. Concentration of increased staffing and the construction of border fences in urban areas along the US-Mexico border reduced illegal immigration in these areas, but increased it in others, diverting border crossers to the deserts and mountains (primarily in Arizona) where they needed the help of smugglers. Human smuggling is essentially a function of border controls. Smuggling migrants initially involved helping migrants carry their belongings across the Rio Grande for $100. As tougher border controls increased demand for smuggling services, small "mom-and-pop" businesses developed and charged fees that grew from around $200 in the early 1990s to around $700 in the latter half of the decade.[22] Deployment of even more US Border Patrol agents, fencing, and border-control technologies after the 9/11 attacks increased the price for being smuggled from Mexico to over $2,500 in the mid-2000s[23] and drew bigger and more violent organized crime groups into the human-smuggling business. Tougher border controls and increasing human-smuggling fees have also had the unintended consequence of making temporary illegal migrants more permanent. As border controls increasingly tightened in the mid-1990s, illegal migrant workers who often crossed back and forth several times every year opted to have their families smuggled into the United States once rather than paying multiple smugglers' fees and repeatedly risking assault, theft, injury, or apprehension on trips back and forth. The development of larger and more organized human-smuggling operations using more sophisticated techniques in response to tighter border controls has created substantial new challenges for implementing border-control technology initiatives, as is explained in greater detail later.

D.   Facilitating and Securing International Trade and Mobility

One reason that control of the border is difficult is the need to facilitate desirable and authorized cross-border flows. This includes not only human mobility — the 400 million passenger entries described earlier — but international trade (a factor all too often ignored in the debate about border controls).

The attacks of 9/11 demonstrated the vulnerability of the US economy to shutdowns of the transportation system. The grounding of commercial air traffic and heightened border security after the attacks amounted to the United States temporarily imposing a sanction that no enemy had

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20   See DHS, *FY2011 Budget-in-Brief*, www.dhs.gov/xlibrary/assets/budget_bib_fy2011.pdf.
21   See speech by Ilkka Laitinen, Executive Director, Frontex, "Keynote Speech for European Border Guards' Day," (Warsaw, Poland, May 25, 2010). www.ed4bg.eu/files/Ilkka_Keynote_Speech_for_ED4BG_24_May2010.rtf. The categories compared are only roughly equivalent in function, e.g. the European Union (EU) figures include the German *Bundesbahnpolizei* (railway police) whereas the corresponding Amtrak police are not in the Department of Homeland Security. On the other hand, the DHS figures include officers devoted to customs enforcement while the EU border guard figure does not include customs officers of EU Member States.
22   Author interview in 1998 with the new Assistant Commissioner for the Border Patrol, Gustavo "Gus" De La Vina.
23   Jennifer Lee, "Human Smuggling for a Hefty Fee," *New York Times,* May 28, 2006.

imposed before: an embargo on trade.[24] This self-embargo demonstrated the vulnerability of extended supply chains and trans-border, just-in-time manufacturing, most dramatically on the US-Canadian border. Up to 10 million vehicles annually crossed the Ambassador Bridge between Windsor, Ontario, and Detroit, Michigan, along with approximately 25 percent of US-Canadian merchandise trade. Shortly after the attacks, traffic backed up for as much as 15 hours. Within days, Daimler-Chrysler announced that it would have to stop several US assembly lines for want of Canadian parts caught in traffic backups at the border. Soon thereafter, DHS quickly loosened border controls in order to relieve the backups. More than any other event, these backups precipitated the US–Canadian "Smart Borders" Declaration[25] and prompted the Bush administration to adopt the information technology-enabled, risk-management approach to border control that resulted in increased budgets for border-control information technologies. Increases in border-control staffing, changing border-control policies and strategies, as well as technological deployments, may be driven much more by trade considerations than as responses to illegal migration, contrary to the depiction and understanding of border controls prevalent among migration scholars.

In sum, increasing cross-border flows of people pose a challenge to CBP as it attempts to reconcile two goals that are often in tension: facilitating the movement of people while increasing the level of control over them. This challenge is compounded by increasing cross-border flows of goods, conveyances, plants, animals, and microorganisms that come with additional missions of collecting duties, intercepting narcotics, and halting the spread of agricultural pests. The challenges of these multiple flows and missions are further compounded by diverging economic interests and security concerns that shape border security policies, as well as the implementation of these policies by CBP. Responding to the concerns of US citizens, Congress passes laws that require "the prevention of all unlawful entries into the United States,"[26] however, at the same time, US importers, exporters, and the travel and hospitality industries exert political pressure on Congress and the White House to loosen controls. A consistent theme in the recent history of US border controls has been the desire to increase both facilitation and security,[27] and leverage new technologies to accomplish both goals. As this report describes below, a number of policy and technological innovations, such as the introduction of trusted-traveler schemes and the use of advance passenger and entry data, occurred in large part as a mechanism to allow more intensive screening of passengers and goods without excessive delays.

III. US Border Security Systems: Development, Implementation, and Effectiveness

How has the United States approached the challenge of border security? The following pages discuss the policies and technologies that have evolved in the United States since the 1960s, but particularly over the past ten years. First, efforts to prevent entries between official ports of entry, most notably the SBI*net* border system, are examined. Next is a discussion of the processes for managing admissions at ports of entry: facilitating rapid processing of growing numbers of travelers and collecting passenger data designed to detect visa abuses in cases of unauthorized overstayers.

The Clinton, Bush, and Obama administrations all have turned to new technologies for border-control "force multipliers." Successive Congresses have been willing to appropriate billions of dollars for a series of systems and programs, most notably, the Secure Border Initiative (SBI) and the automated

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24   Flynn, "America the Vulnerable."

25   For an evaluation of the Smart Border agreements with Canada and Mexico, see Deborah Waller Meyers, *Does 'Smarter' Lead to Safer? An Assessment of the Border Accords With Canada and Mexico,* MPI Insight (Washington, DC: Migration Policy Institute, 2003), www.migrationpolicy.org/pubs/6-13-0~1.PDF.

26   *Secure Fence Act of 2006,* Public Law 109–36, Section 2(b).

27   For an excellent discussion of this issue with respect to international trade, see Chieh Ju Chang, "Customs Organizations, Particularly the U. S. Customs, Facing the Challenge of Striking a Balance Between Trade facilitation and Security," (dissertation, Rutgers University, October 2008).

biometric entry-exit system US-VISIT (see Table 3) as well as registered-traveler systems like NEXUS, SENTRI, and Global Entry, reforms of the Visa Waiver Program, and deployment of the related Electronic System for Travel Authorization (ESTA).

Table 3. Border Security Technology Budgets (Millions), FY 2004-2011

	2004	2005	2006	2007	2008	2009	2010	2011 (Request)
SBI*net*	---	---	---	$28.4	$1,282.8	$745.0	$800.0	$574.2
US-VISIT	$328.0	$340.0	$336.0	$362.5	$355.2	$300.0	$373.7	$334.6

Source: DHS, *DHS Budget-in-Brief*, various years.

These tools have clearly helped CBP officers and Border Patrol agents accomplish their tasks and they have helped DHS to implement a border security strategy with multiple layers of controls that extend well beyond the physical boundary of the United States. What is not so clear, however, is whether these programs have been worth the cost, with respect to the mission of reducing illegal migration. Would some of the billions that have been spent have had a bigger impact on reducing illegal migration if they had been diverted to additional CBP or Border Patrol staff? Or on internal enforcement by ICE officers? Or even on other information technology systems? Despite the strong political emphasis on securing the border, SBI*net* and US-VISIT provide only a very incomplete solution to the problem of illegal immigration. SBI*net* and US-VISIT have pushed up the cost of being smuggled into the United States and, thereby, have deterred some from attempting to cross illegally. But the continuing growth of the unauthorized population until the recent economic crisis raises the question how significant the reduction in illegal immigration attributable to these technology deployments has been, and whether it was worth these border technologies' enormous cost.

A.   *Surveillance Between Ports of Entry and the Secure Border Initiative*

The use of surveillance technologies for border security in the United States dates back to the 1970s and 1980s when the former INS began deploying low-light video cameras and portable electronic intrusion-detection ground sensors at the border. In 1997, INS developed the Integrated Surveillance Intelligence System (ISIS), which deployed motion, infrared, seismic, and magnetic sensors. By 2000, some 13,000 ground sensors were in place. When sensors that detect motion and heat are combined with remotely controlled video cameras, Border Patrol agents could detect clandestine entries, train cameras on illegal migrants and smugglers to determine their numbers and whether they are carrying weapons, and then dispatch the appropriate patrols. Nevertheless, ISIS was only deployed along 4 percent of the border, with 10,500 sensors remaining operative in October 2005.[28] Many of the sensors proved difficult to maintain in a variety of weather conditions and did not have the ability to differentiate animals from humans. False alerts triggered by animals resulted in diverted and wasted patrol manpower.

In 2005, DHS launched a new technology project designed to monitor the border: the Secure Border Initiative (SBI). SBI is a comprehensive, multi-year plan which, among other things, involves a "systemic upgrading of the technology used in controlling the border, including increased manned aerial assets, expanded use of unmanned aerial vehicles (UAVs), and next-generation detection technology."[29] SBI*net*, canceled in January 2011, was by no means the only border technology project in the United States and is widely considered one of the less successful projects of its kind; but its

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28   US Government Accountability Office (GAO), *Key Unresolved Issues Justify Reevaluation of Border Surveillance Technology Program* GAO-06-295 (Washington, DC: GAO, 2006), www.gao.gov/new.items/d06295.pdf.
29   DHS, "Secure Border Initiative," (Fact Sheet, February 11, 2005), www.dhs.gov/xnews/releases/press_release_0794.shtm.

experience — and some of its shortcomings — help to illustrate challenges facing US policymakers and to indicate how they might be overcome.

I.   SBI*net* and the Role of Private Contractors

In support of the initiative, CBP issued a solicitation for the Secure Border Initiative Network (SBI*net*) contract, estimated at $2.5 billion. Normally, government agencies that outsource information-system development will issue a set of requirements for the necessary information systems and firms subsequently bid with proposals to develop and install systems that meet these requirements. In contrast, CBP held an SBI*net* "industry day" on January 25, 2006, for more than 400 private-sector participants at which DHS Deputy Secretary Michael Jackson took outsourcing a step further, stating, "This is an unusual invitation. I want to make sure you have it clearly, that we're asking you to come back and tell us how to do our business. We're asking you. We're inviting you to tell us how to run our organization."[30] After interested firms coalesced into teams — headed by Raytheon, Lockheed Martin, Boeing, Ericsson, and Northrop Grumman — they were invited to submit proposals, from which the CBP selected the Boeing team in September 2006.

The virtual fence envisioned by Boeing was to be composed of sensor and radar arrays mounted on 1,800 towers built along the Southwest border. Data from sensor detection of cross-border intrusions would trigger high-resolution video of the senor hit location and, if an illegal border crosser was identified, dispatch Border Patrol agents to intercept the border crossers and/or notify any Border Patrol agents in the vicinity. Under this plan, Border Patrol agents would be equipped with mobile computers that would give them access to a Common Operating Picture — a single, identical image display — of the border environment, one that could be shared with other DHS agencies as well as state and local partners. This would fulfill a broader objective of providing comprehensive "situational awareness" and improving interoperability across law enforcement units.

Developing a comprehensive border security strategy that incorporates new technologies makes sense. The way in which the Bush administration approached SBI*net*, however, handed enormous responsibility for developing that strategy to external private-sector contractors, more specifically, to military contractors who may or may not have immigration policy or civilian border security expertise. Any information technology project, whether in the public or private sector, carries a risk of ill-conceived and inappropriate solutions, cost overruns, and delays if external contractors are not able to adequately assess the needs of the organization and to adequately translate those needs into detailed system requirements and specifications.

Among the risks:

- Rank-and-file members of the organization will not accept or support new processes and systems developed by external consultants, who may not have equivalent experience and domain expertise but are paid much more.

- External consultants will be biased toward solutions that maximize the use of their own firm's services, personnel, and equipment regardless of the cost to the organization.

- If internal operational and IT staff do not sufficiently participate in all phases and aspects of the project from the get-go, there is also a danger that when the external consultants leave at the end, internal staff will not have sufficient knowledge of, and investment in, the system to manage it effectively.

There is an even greater risk of an organization getting what the external contractors can most easily deliver at the highest profit instead of getting what the organization needs to fulfill its mission when contractors are given authority for the formulation of the strategy that shapes the

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30   CBP, Transcript of SBInet Industry Day, January 26, 2006, www.bibdaily.com/pdfs/industry_day_trans.pdf.

organization's information technology needs, as, unfortunately, appears to have been the case with SBI*net*.

2.   Technological Difficulties

These risks were realized when the first SBI*net* deployment along 28 miles of the US-Arizona border (Project 28) was repeated delayed, and then further complicated when DHS would not accept the delivered system due to a variety of concerns about its design and implementation. SBI*net* contractors had not sufficiently consulted Border Patrol agents, who would be the system users, in the design and planning process. This led to heroic assumptions about watching, let alone operating, bouncing laptop computers while driving Border Patrol four-wheel drive vehicles on rough dirt roads or no roads at all. Much of the equipment failed to work as expected. For example, the high-resolution video cameras designed with a range in excess of 10 kilometers, had resolution problems above 5 kilometers, with cameras sometimes automatically focusing on raindrops and tumbleweeds rather than border crossers. SBI*net* initially used police dispatching software that could not handle the tremendous data flows from sensors, radar, and video feeds. In March 2010, when SBI*net* had yet to deliver the promised capabilities even for a limited stretch of the Arizona border, and the system completion date for the entire border slipped to 2016, Homeland Security Secretary Janet Napolitano ordered a reevaluation of the program and diverted $50 million in additional funding allocated to SBI*net* in the 2009 Recovery Act to other "proven technologies." On January 14, 2011, she formally scrapped the program, on which an estimated $1 billion had already been spent. In its place, she promised a new program using existing technology, such as UAVs, sensors, and thermal imaging.[31]

3.   Weaknesses in the SBI*net* Strategy

SBI*net* is not simply another big technology project gone wrong; the virtual fence is flawed in its very conceptualization. First, it can be bypassed through ports of entry. According to DHS, SBI*net* would drive illegal border crossers to ports of entry where CBP officers "have the greatest tactical advantage."[32] In 2006, CBP officers turned back 200,000 people at ports of entry but many migrants are still smuggled in using fraudulent documents or hidden in vehicles.[33] In addition to the standard $2,500 smuggling fee, migrants pay smugglers fees of up to $2,000 for such "express service" instead of crossing dangerous deserts and mountains.[34] Pushing current illegal border crossers to ports of entry clearly makes apprehensions easier, although it requires sufficient resources to be spent on inspections of travelers and vehicles. According to a 2007 US Government Accountability Office (GAO) assessment, CBP officers routinely waved vehicles though without inspection and several thousand additional officers were needed to properly handle existing flows.[35] Although CBP has hired thousands of additional staff since 2007, unless staffing and infrastructure at ports of entry keep up with increasing smuggling attempts of those diverted to ports of entry by SBI*net* deployments, wait times will increase, as will pressure to move traffic through without thorough inspection, thereby enabling smugglers to bypass SBI*net*.

Second, a virtual fence is only effective when backed up by sufficient numbers of personnel to respond to alerts and apprehend border crossers. But smugglers also can divert these personnel using decoys. Much as the former Soviet Union could inexpensively build and deploy many more decoy nuclear warheads than the proposed Strategic Defense Initiative (SDI)'s anti-ballistic missile systems could ever completely shoot down, smugglers can hire Mexican nationals to cross the border, be detected by SBI*net*, and then tie up a sufficient number of the Border Patrol agents dispatched to catch them

31   See J. Nicholas Hoover, "Obama Administration Scraps 'Virtual Border'," *Information Week,* January 15, 2011, http://www.informationweek.com/news/government/security/showArticle.jhtml?articleID=229000747.
32   CBP, "What SBI*net* Means to CBP Officers and Agents," (fact sheet, 2006).
33   GAO, *Despite Progress, Weaknesses in Traveler Inspections Exist at Our Nation's Ports of Entry*. GAO-08-219 (Washington, DC: GAO, 2007), www.gao.gov/new.items/d08219.pdf.
34   Ken Dermota, "Human smugglers launch 'coyote express' into US," Agence France Presse, May 18, 2007.
35   GAO. *Despite Progress, Weaknesses in Traveler Inspections Exist at Our Nation's Ports of Entry*: 7.

so others can be safely led across the border.[36] Given that desperately poor people carry bales of marijuana as drug mules for as little as a few hundred dollars,[37] less-risky decoy work can come even cheaper. In contrast, CBP estimates that it costs almost $160,000 to field each additional Border Patrol agent.[38] As long as it costs smugglers less to hire enough decoys to divert Border Patrol agents than it does to hire a sufficient number of Border Patrol agents to exceed the effect of the decoys' diversion, investments in physical and virtual fencing will not significantly reduce illegal migration. Hypothetically, SBI*net* could work well as long as illegal border crossers do not behave strategically and take asymmetric cost-effective countermeasures; however, making such an assumption about an opponent's behavior is rather naïve.

B.   Border-Control Processes at Ports of Entry

With increasing numbers of international travelers and the desire to screen larger numbers of people more effectively, policies have focused on processing information more quickly and on allowing low-risk individuals or cargo to enter the country with less extensive screening. The next few pages examine the evolution of technologies and processes designed to speed up inspections at ports of entry.

The basic tasks of border control once travelers reach a US port of entry have not changed that much over the past few decades. In the primary inspection process a traveler first encounters at a port of entry, a CBP officer inspects the traveler's documents and asks a few questions about the planned stay and the individual's background. Then the officer either allows the traveler to enter or, if the officer has some reason to think that the travel documents are fraudulent or that the person is not authorized to enter, the officer may direct the traveler to secondary inspection, at which point the traveler may be more thoroughly questioned, his or her documents more carefully scrutinized, and personal effects searched.

Beginning in the 1960s and further implemented in the 1970s, the governments of advanced industrialized countries developed automated-visa and entry systems that provided relevant information to consular officers and border-control officers by pulling records from national criminal databases, as well as from other law enforcement, foreign ministry, and border-control agency databases. In 1983, the National Automated Immigration Lookout System (NAILS) became operational and by 1988 became available to US immigration inspectors at 44 of the then 610 ports of entry.[39] In April 1989, the INS and the US Customs Service began implementing the Interagency Border Inspection System (IBIS), a system shared by 20 law enforcement and border-control agencies that resides on the Treasury Enforcement Communication System (TECS) at the CBP Data Center. IBIS provides field level access to additional data (e.g. the FBI's National Crime Information Center [NCIC] database) via a network with more than 24,000 computer terminals at air, land, and sea ports of entry.[40] Entry systems such as IBIS accelerated throughput and increased security by improving the accuracy of conducted searches and by allowing consular officers and inspectors to spend additional time focusing on more relevant cases.

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36   Already in urban areas with physical fencing, "Smugglers will often draw the Border Patrol agents' attention by sending a
     decoy across a section of the fence they don't intend to cross." Tim Gaynor, *Midnight on the Line: The Secret Life of the U.S.-
     Mexico Border* (New York: Thomas Dunne Books, 2009): 98.

37   Author's discussion with local law enforcement officials, Nogales, Arizona, October 2009.

38   GAO, *CBP Could Improve Its Estimation of Funding Needed for New Border Patrol Agents* GAO-09-542R (Washington, DC: GAO,
     2009), www.gao.gov/new.items/d09542r.pdf.

39   GAO, *Computer Systems: Overview of Federal Systems for Processing Aliens Seeking U.S. Entry* GAO/IMTEC-88-55BR (Washing-
     ton, DC: GAO, 1988), http://archive.gao.gov/d17t6/137032.pdf. For consular officers, the Automated Visa Lookout System
     (AVLOS) was developed in 1966 and by 1988 it was available at about 90 of the more than 240 consular posts around the
     world.

40   CBP, "CBP Authority to Search," August 18, 2010, http://cbp.dhs.gov/xp/cgov/travel/admissibility/authority_to_search.xml.

The first major challenge to implementing effective entry systems was the combination of the rapidly increasing volume of travelers and the necessity for border-control officers to accurately enter data from the traveler's passport into the system. Computerization was supposed to make entry processes more efficient, but until the late 1990s when a younger generation that used computers in high school began to enter government service, most border-control officials were typically unaccustomed to typing. Slow data entry and typographical errors often lengthened queues. At the same time, the total number of international tourist arrivals worldwide increased from 69.3 million in 1960 to 165.8 million in 1970, 278.1 million in 1980, 439.5 million in 1990, and 687.0 million in 2000.[41] These growing flows reflected the growth of mass tourism enabled by passenger jet aircraft and the 1970 launch of the Boeing 747 jumbo jet presented border-control authorities with a huge problem. Even if border-control officers learned to type at 90 words per minute, it quickly became clear that it would be very difficult to process travelers through automated-entry systems when several jumbo jets arrived simultaneously and disgorged 500 passengers each, with many of them attempting to catch connecting flights.

Several states found a solution through international negotiations that lasted more than a decade. In 1968, member states of the International Civil Aviation Organization (ICAO) established a "Panel on Passport Cards" to develop standards for machine-readable passports. ICAO eventually published specific technical standards in 1980, enabling the United States, Australia, and Canada to issue the first machine-readable passports that were interoperable with the readers that each state deployed.[42] Once the passports and readers were deployed, US border-control officers, for example, could simply swipe the machine readable zone of new Australian passports and automatically populate the fields necessary to conduct watch-list checks and process the arrival of the traveler. Throughout the 1980s and on into the next decades, an increasing number of the world's states issued machine-readable travel documents (MRTDs) that conform to ICAO standards.

C.   Registered-Traveler Programs

Registered-traveler programs take the combination of machine-readable passports, passport scanners, and automated-entry systems to another level in the effort to expedite movement of low-risk travelers through passport inspection at airports and land-border crossings. These systems serve as prime examples for how new technologies facilitate travel flows while allowing inspectors to concentrate on more high-risk travelers.

At US land borders, NEXUS and SENTRI are registered-traveler programs in which frequent travelers enroll by submitting information for criminal and terrorist background checks. NEXUS is jointly administered by the United States and Canada; the SENTRI program operates at US ports of entry along the border with Mexico. After a NEXUS enrollee clears the background check, that person receives a radio frequency (RF)-enabled proximity card. When a traveler with a NEXUS card approaches US or Canadian border controls, the RF chip on this card is read at the port of entry and automatically pulls up background information and a photo for an inspector. The inspector then can quickly verify the NEXUS cardholder's identity and wave him or her through. The SENTRI process is similar except that it uses a vehicle-based radio frequency identification transponder attached to the enrollee's car.

Global Entry is a registered-traveler pilot program launched in June 2008 at several US airports. Like NEXUS and SENTRI, Global Entry applicants submit detailed information for background checks but also provide facial and fingerprint biometrics. Enrollment in the program costs $100 and is valid for

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41   United Nations World Tourism Organization (UNWTO), *Tourism Market Trends* Annex (Madrid: UNWTO, 2006).
42   International Civil Aviation Organization (ICAO), "Machine Readable Travel Documents (MRTDs): History, Interoperability and Implementation," (working paper, Technical Advisory Group on Machine Readable Travel Documents, ICAO, Madrid, March 2007), www.icao.int/icao/en/atb/sgm/mrtd/tag_mrtd17/TagMrtd17_WP016.pdf.

five years or until the pilot has ended. Initially, Global Entry was only open to US citizens and legal permanent residents, but in June 2009 expanded to accept applications from Dutch citizens who were members of the Privium registered-traveler program at Amsterdam's Schiphol Airport. In April 2010, DHS agreed to reciprocal privileges that would allow applications from German citizens already enrolled in Germany's "Automated and Biometrics-Supported Border Controls" pilot program. Once enrolled in Global Entry, travelers use a kiosk, in which they swipe the machine-readable zone of their passports, submit their fingerprints, and afterward answer questions on a computerized customs declaration form. As of April 2010, the Global Entry program had 42,000 members and was available at 20 US airports.[43]

Registered-traveler programs such as these have often become showpieces of border-control agency modernization programs and budgetary requests. They have been relatively uncontroversial, politically, as they are voluntary in nature. They also provide positive promotional material for governments because they facilitate travelers though border controls.

However, registered-traveler programs are not always as well received by inspectors, many of whom do not trust them. Some border-control officials and security experts are concerned that registered-traveler programs are precisely the avenues that smugglers and terrorists will attempt to use for access. For example, Salim Boughader Mucharrafille, a Lebanese-Mexican restaurant owner, was arrested in the United States for human smuggling when he crossed the border in 2002 for an appointment to enroll in the SENTRI program.[44] Of course, Boughader did not pass the screening — the appointment was a ruse. It is noteworthy, however, that someone who had smuggled some 200 Lebanese nationals (some reportedly connected to Hezbollah) into the United States would have the nerve to apply to a "trusted-traveler" program. While NEXUS and SENTRI card holders must submit to random inspections to ensure that once they have received expedited treatment they do not transport contraband, concerns within the ranks have been raised about the possibility of "another Boughader," but one more careful with no record on intelligence watch lists.

D.   *Entry-Exit Systems*

Entry-exit systems collect data on arriving and departing foreign nationals in order to monitor compliance with immigration laws and detect individuals who overstay their visas. The United States Visitor and Immigrant Status Indicator Technology (US-VISIT) program was initially envisioned as an automated biometric entry-exit system that would eventually incorporate the ability to keep track of foreigners during their stay in the United States, monitoring their immigration status and the type of visa they hold. In its current state, US-VISIT supports the inspection process at all ports of entry by including biometric data collection to the previously existing Interagency Border Inspection System (IBIS). However, the data it collects is currently incomplete, with only approximately 30 percent of those who enter the United States required to submit biometrics — and with no collection of biometric exit data, its usefulness is limited. Moreover, until exit data-collection capabilities are deployed, the development of more advanced visitor status management functions for combating illegal migration remains in doubt.

1.   Entry-Exit System Legislation

The program has roots in legislation from 1996, when Congress passed the *Illegal Immigration Reform and Immigrant Responsibility Act of 1996.* This law mandated the development of an automated entry-exit control system that would "collect a record of every alien departing the United States and match the records of departure with the record of the alien's arrival in the United States."[45] US business

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43   Roger Yu, "US Program Global Entry Expands to German Fliers," *USA Today,* April 18, 2010.
44   Marisa Taylor and Sandra Dibble, "Tijuana man charged with heading up a smuggle ring; Middle Eastern immigrants were helped, officials believe," *The San Diego Union-Tribune,* December 14, 2002.
45   *Illegal Immigration Reform and Immigrant Responsibility Act of 1996,* H.R. 11787, section 110.a.1, "Automated Entry-Exit

groups, states, and localities bordering Canada and Mexico argued against the new entry-exit data-collection requirements, noting that registering every person who crosses into the United States from Canada or Mexico, even using then-existing smart card technology, would still require enough processing time to back up traffic at the border for hours, impair international movement of goods and people, and, thereby, cost billions of dollars in lost trade and tourism receipts to the United States.[46]

In response to intensive lobbying, Congress delayed the impending deadline for implementation of the law in 1998.[47] In 2000, new legislation again pushed back the deadline, mandating the development of an entry-exit system in place at all air and seaports by the end of 2003, at the 50 most highly trafficked land ports of entry by the end of 2004, and at all ports of entry by the end of 2005.[48] In practical terms, however, the 2000 legislation deflected the creation of a full-fledged entry-exit system with a complete database since it limited data collection to that which was already being collected by existing authorities and disallowed collection of any new entry-exit data (for example, from travelers entering or exiting the United States over land borders who previously had not been required to submit data).[49]

The entry-exit tracking system existing in 2000 primarily covered passengers arriving by air and consisted of a paper I-94 arrival/departure form stamped at the port of entry, which was supposed to be collected by the airline upon departure, given to immigration authorities, and entered into a database. Due to lost forms, incomplete or inaccurate data entry, exit by land border, and incomplete deployment of the system, missing exit data corrupted the database, leaving immigration inspectors with no effective way of knowing if individuals had overstayed their visas.[50] This was the case with several of the 9/11 hijackers.

In response to the September 11 attacks and the failures of government information systems that they exposed, further legislation in 2001-2002[51] reiterated the deadlines and mandate for a US entry-exit program, and required that it should: utilize biometric technology and tamper-resistant, machine-readable documents to record both arrivals and departures; interface with other law enforcement databases; install equipment at all ports of entry to enable collection, comparison, and authentication of biometric data; and establish standards for biometrics for visas and other travel documents. Subsequently, the Intelligence Reform and Terrorism Prevention Act of 2004 called for an acceleration of the full implementation of an automated biometric entry-exit data system and collection of biometric exit data from all those required to provide biometrics upon entry.[52]

2.   The Launch of US-VISIT and its Initial Implementation

US-VISIT collects biographical and biometric data (digital photo of face and finger scans) from foreign nationals when they apply for visas at US consulates abroad as well as when they enter the United States, and watch-list checks are run on the data collected. US-VISIT was first deployed at airports on January 1, 2004, and by the end of 2005 was in place at all 284 air, land, and sea ports of entry.[53]

Control System," US *Congressional Record* — House (September 28, 1996).

46   Senate Judiciary Committee report submitted with *The Border Improvement and Immigration Act of 1998,* Senate Report 105-197 (1998).

47   Theodore H. Cohn, "Cross-Border Travel in North America: The Challenge of U.S. Section 110 Legislation," *Canadian American Public Policy* 40 (1999).

48   *The Data Management Improvement Act of 2000,* Public Law 106-215.

49   Ibid.

50   Statement of Michael R. Bromwich, Inspector General, US Department of Justice, before the House Judiciary Committee, Subcommittee on Immigration and Claims, *Illegal Aliens in the United States,* 106th Cong., 1st sess., March 18, 1999, http://judiciary.house.gov/legacy/106-brom.htm.

51   *Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT) Act of 2001,* Public Law 107-56, section 414; and *Enhanced Border Security and Visa Entry Reform Act of 2002,* Public Law 107–173, section 302.

52   *The Intelligence Reform and Terrorism Prevention Act of 2004,* House Report 108-796, Section 7208.

53   DHS, "DHS Completes Foundation of Biometric Entry System," (news release, December 30, 2005).

From the initial deployment of US-VISIT to March 2008, biometrics have been collected from 113 million individuals entering the United States,[54] making US-VISIT one of the world's largest biometric databases. Enrollment in US-VISIT is only required of those traveling on a regular visa, those entering under the Visa Waiver Program and, as of January 2009, legal permanent residents and several other categories of foreign nationals. Enrollment in US-VISIT is not required of US citizens, visa-exempt Canadian nationals,[55] or the 7 million-plus Mexicans with border crossing cards.[56] If current entry rates follow recent historical patterns, less than 30 percent those who enter the United States are required to enroll in US-VISIT (see Table 4).

Table 4. Entries into the United States (millions), FY 2002

	Air	Land	Sea	Totals
Exempt from US-VISIT				
US citizens	33.0	120.7	7.4	161.1
Mexican Border Crossing Card holders	---	104.1	---	104.1
Visa-exempt travelers (Canadians)	---	52.2	---	52.2
Subtotal US-VISIT Exempt Entries	*33.0*	*277*	*7.4*	*317.4*
Covered by US-VISIT				
Legal permanent residents	4.4	75.0	0.2	79.6
Visa Waiver Program country travelers	13.0	1.8	0.3	15.1
Regular visa travelers	19.3	4.5	4.5	28.3
Total Entries	*67.9*	*358.3*	*12.4*	*440.4*

Source: DHS US-VISIT Office, "Request for Proposals for US-VISIT Program Prime Contractor Acquisition," RFP no. HSSCHQ-04-R-0096, November 28, 2003: 12.

The US-VISIT program successfully completed its last rollout at land borders at the end of 2005. Implementation of US-VISIT at land borders did not significantly disrupt traffic flows as had been feared because, at the time, enrollment was only mandatory for less than 2 percent of those crossing land borders and could be performed in secondary inspection. When US-VISIT enrollment was extended to legal permanent residents in 2009, CBP officers at land border crossings were given discretion as to which permanent residents would be referred to secondary inspection and enrollment in US-VISIT,[57] thereby limiting the impact on traffic flows.

3.   Challenges in the Implementation of the US Entry-Exit System

There have been serious challenges to implementing US-VISIT at entry, exit, and in using the data collected for immigration law enforcement. Given that enrollment in US-VISIT is not required of all those who enter the country, illegal border crossers can evade its biometric capabilities using travel document fraud. It becomes important, therefore, to ensure that exempt persons are in fact who they say they are. For example, some 811,000 US passports have been reported to INTERPOL as lost or stolen,[58] some of

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54   Remarks by Homeland Security Secretary Michael Chertoff at the US Department of Homeland Security Fifth Year Anniversary" (Washington, DC, March 6, 2008).

55   Canadian nationals entering the United States for short stays are exempt from most visa requirements and also from US-VISIT; however, those who are entering the United States on a visa are required to be enrolled in US-VISIT.

56   Border crossing cards (also known as "laser visas") are wallet-sized laminated cards with biometric information that are only available to Mexican nationals and entitle holders to enter the United States and remain in the border region up to 25 miles into US territory for up 30 days.

57   DHS, "United States Visitor and Immigrant Status Indicator Technology Program ("US–VISIT"); Enrollment of Additional Aliens in US–VISIT," *Federal Register* 71 (144): 42605-42611. http://edocket.access.gpo.gov/2006/pdf/E6-11979.pdf.

58   INTERPOL Presentation, Border Security 2006 (Warsaw, Poland, May 9-10, 2006).

which are used by illegal border crossers to pose as US citizens. In FY 2009, more than 4,500 fraudulent passports and 13,000 fraudulent border crossing cards were intercepted by CBP officers at all ports of entry.[59]

The biggest implementation challenge, however, is collection of exit data, particularly biometric exit data. There was no clear requirement for the collection of biometric exit data until legislation in 2004 mandated it be collected for all individuals providing biometric entry data.[60] This means that biometric exit data will need to be collected from travelers at any air, sea, or land port of entry and that those who submit biometrics to US-VISIT when entering must also be able to submit their biometrics at all international airports and seaports as well as official crossing points along the land border when they leave. This legislation also requires that DHS report to Congress on progress in developing a biometric exit process, the first of which was to be provided by June 2005. A December 2006 GAO report[61] explained in detail that this progress report was not produced a year and a half after the deadline and a viable plan for a biometric exit process is not yet in sight — six years after the congressionally mandated deadline.

At most land border crossings there is currently no infrastructure for collecting exit data. Exit data is only collected for those traveling on visas and under the Visa Waiver Program if the travelers in question can find a drop box in which to deposit their I-94 forms at CBP inspection locations on inbound lanes. In many cases, a persistent, regulation-obeying individual must pull over to the side of the highway lanes leaving the country, then cross the highway to the US inspection facilities on the inbound lanes and ask an officer what to do with the form.

One could envision exit controls at all land border crossings that would mirror entry controls with the construction of additional lanes and booths, the installation of biometric readers and workstations, and the hiring of inspectors to process departing foreigners and record US-VISIT exit data. Neither the Bush nor the Obama administrations have requested the billions of dollars of funding that such exit controls would require, however.

DHS did conduct a pilot program using Radio Frequency Identification (RFID) at five land ports of entry in 2005 but, after disappointing results, the pilot program was ended with no further plans for deployment. As explained in detail elsewhere,[62] US-VISIT's objective of determining whether someone has overstayed or should be apprehended when leaving may be next to impossible to achieve because there are limits as to what processes can be securely automated in the collection of exit data. An RFID-based exit system may record the exit of a travel document with an RFID chip, but one cannot be certain that the person exiting with the document is the same person who entered with it unless physically verified against the document picture and the database biometrics linked to the RFID chip.

The Australian entry-exit system demonstrates that an automated entry-exit system can be a powerful tool to identify visa overstayers. This system flags visa overstayers as they depart the country and adds these records up, thereby enabling detailed reports on the exact number of visa overstayers by country (e.g., 4,940 US citizens overstayed their Australian visas in 2004, more than nationals of any other country[63]). The system relies on data accurate enough to ensure that the lack of an exit record truly means that the person in question actually has not left the country. In the US system, however, lost I-94

59   GAO, *Improvements in the Department of State's Development Process Could Increase the Security of Passport Cards and Border Crossing Cards* GAO-10-589 (Washington, DC: GAO, 2010): 2, www.gao.gov/products/GAO-10-589.

60   *The Intelligence Reform and Terrorism Prevention Act of 2004,* House Report 108-796, Section 7208 (d).

61   GAO*, US-VISIT Program Faces Strategic, Operational, and Technological Challenges at Land Ports of Entry* GAO-07-248 (Washington, DC: GAO, 2007), www.gao.gov/products/GAO-07-248.

62   Rey Koslowski, *Real Challenges for Virtual Borders: The Implementation of US-VISIT* (Washington, DC: Migration Policy Institute, 2005), www.migrationpolicy.org/pubs/Koslowski_Report.pdf; Testimony of Rey Koslowski before the Senate Judiciary Committee Subcommittee on Terrorism, Technology and Homeland Security, *US-VISIT: Challenges and Strategies for Securing the U.S. Border,* 110th Cong., 1st sess., January 31, 2007. http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_senate_hearings&docid=f:34148.pdf.

63   Koslowski, *US-VISIT: Challenges and Strategies.*

arrival/departure forms, incomplete or inaccurate data entry, and exit by land borders have meant that the missing exit data corrupted the database.[64]

Moreover, few overstayers are likely be apprehended and deported as a result of an entry-exit system. It is unlikely that an overstayer would remain at the address originally given upon arrival, and even if he or she did, only a limited number of ICE officers are available to find, apprehend, and deport millions of visa overstayers in the United States. US-VISIT has been generating a increasing number of leads on visa overstays to ICE, but the number of arrests is miniscule compared to the total population of unauthorized immigrants who overstayed their visas (see Table 5). Given these constraints, ICE places a priority on apprehending visa overstayers who have committed serious crimes.

Table 5. In-Country Visa Overstay Identification, Enforcement, and Estimated Population, FY 2006-2009

	2006	2007	2008	2009	Total
Priority In-Country Leads Referred to ICE	4,155	12,372	13,343	16,379	46,249
ICE Arrests Based on Referrals	139	338	715	568	1,760
Estimated Number of Visa Overstayers	4,640,000	4,720,000	4,640,000	4,320,000	----

Note: Overstay population estimate based on estimates in Table 1, using a 40 percent proportion of visa overstays of the total estimated unauthorized population.
Source: Statement for the Record of Rand Beers, Undersecretary, DHS National Protection and Programs Directorate before House Committee on Homeland Security, *Visa Overstays: Can They Be Eliminated?*, 111th Cong., 2nd sess., March 25, 2010.

Although it is clear that an automated entry-exit system cannot automatically enforce visa time limitations, such a system constrains the options open to visa overstayers — which may, in turn, modify their behavior. Most importantly, individuals may be able to overstay their visas once, but it would be very difficult for them to leave the country, apply for another visa, and overstay again. Without a credible entry-exit system, visa overstayers have not only been able to stay in the United States, but also to travel back and forth. If nothing else, a credible entry-exit system could reduce the total number of visa overstayers in the country simply by stopping those who have overstayed from returning again. As it stands, US-VISIT has generated an increasing number of look-outs for those who overstayed their visas in the past that consular and CBP officers have used to deny visa applications and entry (see Table 6). But given the tens of millions of foreign travelers entering the country every year, it is not clear that several thousand denials for overstaying is a sufficient deterrent to those who entered legally and are considering remaining beyond their authorized stay.

Table 6. Out-of-Country Visa Overstay Identification, Enforcement, and Travel Flows, FY 2006-2009

	2006	2007	2008	2009	Total
Out-of-Country Lookouts Created	457	7,357	13,276	16,691	37,781
Port/Visa Refusals Based on Lookouts	5	451	1,441	2,502	4,399
Nonimmigrant Admissions	33,667,328	37,149,651	39,381,928	36,231,554	----

Source: Beers statement, *Visa Overstays: Can They Be Eliminated?;* DHS Office of Immigration Statistics, *Non-Immigrant Admissions 2009* Annual Flow Report and *Non-Immigrant Admissio*ns 2008 Annual Flow Report (Washington, DC: DHS Office of Immigration Statistics, 2007 and 2009).

In sum, the deployment of US-VISIT has added the collection of biometric data to the existing entry process, creating an additional obstacle to entry by impostors and increasing the accuracy of watch-

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64   For details, see Koslowski, *Real Challenges for Virtual Borders*. On overstay numbers, see Australian Department of Immigration and Multicultural and Indigenous Affairs, *Population Flows: Immigration Aspects, 2004-2005* (Canberra, Australia: Department of Immigration and Multicultural and Indigenous Affairs, 2006): 77, www.immi.gov.au/media/publications/statistics/popflows2004-5/.

list checks for criminals and potential terrorists. Enrollment in US-VISIT, however, is required of a relatively small percentage of all those who enter the United States, particularly at land borders. The only exit data collected is biographical exit data from airline and ship manifests; no land border exit data and no biometric exit data are collected. US-VISIT has stopped 4,399 immigration law violators from entering the United States and it has provided leads to ICE for the arrest of 1,790 visa overstayers already in the country. However, when one places these figures in the larger context of travel flows and the total unauthorized population, US-VISIT's contribution to immigration law enforcement has been marginal, has come at a relatively high price, and has not come close to realizing the potential originally envisioned.

E.   *Visa Waiver Program Reform, ESTA, and US-VISIT Air Exit*

The Visa Waiver Program (VWP), which permits visa-free travel to the United States for nationals of states such as the United Kingdom, France, Germany, and Ireland, emerged from obscurity onto national security radar after 9/11. Zacarias Moussaoui, the so-called 20th hijacker, had entered the United States using just his French passport. Then, in December 2001, British national Richard Reid boarded a transatlantic flight with only his passport and tried to detonate a bomb in his shoes.

VWP is designed to facilitate travel and to reduce visa processing costs at consulates in countries considered to pose a low risk of illegal immigration or terrorism. The "shoe bomber" incident, however, prompted members of Congress to call for the elimination of the US Visa Waiver Program altogether. But after the GAO estimated that eliminating the program would initially cost the State Department up to $1.28 billion for consular facilities and staffing and would generate ongoing annual costs of up to $810 million (roughly 11 percent of the State Department's entire $7.4 billion FY 2002 budget),[65] Congress decided to keep the program, instead passing legislation in 2002 requiring VWP members to issue passports with biometrics on RFID chips.[66] In 2006, UK officials uncovered a plot involving more than 20 British nationals of Pakistani origin, who planned to board US-bound flights and blow them up with liquid explosives. At subsequent congressional hearings, then Director of National Intelligence Michael McConnell testified that al Qaeda was recruiting Europeans because they could travel to the United States with just a passport.[67] Once again, members of Congress introduced legislation to eliminate the VWP.

Congress eventually struck a political compromise between the two extremes of eliminating the program and adding new states to the existing program, opting to reform it. The biggest obstacle to expanding program membership has been its 3 percent visa refusal rate requirement. The visa refusal rate is the percentage of visa applications from a country's nationals that are rejected by consular officers, which largely depends on officers' judgment of whether applicants are likely to comply with the terms of their visas. The *Implementing Recommendations of the 9/11 Commission Act of 2007* (also known as the "9/11 Act") authorized the Secretary of Homeland Security to waive the 3 percent visa refusal requirement and accept countries with refusal rates of between 3 percent to 10 percent, thereby opening the door to several EU Member States.[68]

Congress initially required the 3 percent refusal rate to minimize the arrival of travelers who enter the country legally but overstayed their visas. Basing approval for the program on a country's visa overstay rate would have made more sense, but exit data was deemed too inaccurate to calculate reliable overstay rates. Instead, Congress conditioned its authorization for DHS to admit countries

65   GAO, *Implications of Eliminating the Visa Waiver Program* GAO-3-38 (Washington, DC: GAO, 2002): 21, www.gao.gov/new.items/d0338.pdf.

66   *The Enhanced Border Security and Visa Entry Reform Act of 2002,* Public Law 107-173.

67   Testimony of Michael J. McConnell, Director of National Intelligence, before the Senate Committee on Homeland Security and Governmental Affairs, *Confronting the Terrorist Threat to the Homeland Six Years after 9/11,* 110th Cong., 1st sess., September 10, 2007, http://hsgac.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing_ID=08c0203e-2fee-47f4-9a9a-4c0c2e399abc.

68   *Implementing the Recommendations of the 9/11 Commission Act of 2007,* Public Law 110–53.

with 3 percent to 10 percent visa refusal rates on:

- DHS implementation of an Electronic System for Travel Authorization (ESTA);

- development of DHS capacity to verify the departure of those travelers who entered the United States; and,

- negotiation of information-sharing agreements between the United States and VWP members on terrorist information, criminal data, and lost and stolen passports.

Congress required DHS to put in place an ESTA similar to that used by Australia for more than a decade. ESTA requires travelers to submit biographical data found in their passports through a website at least 72 hours in advance of departure. As of January 12, 2009, all VWP travelers have been required to use ESTA. DHS estimated that authorization would be denied to 4 percent of ESTA users; those denied are directed to apply for a visa at a US consulate.[69]

Congressional authorization of VWP expansion also required that DHS certify the departure of 97 percent of international air travelers, before states with 3 percent to 10 percent visa refusal rates were allowed to participate. In order for DHS to maintain this authority, the 9/11 Act further required that departure of those who enter under the program to be verified by biometric exit controls at airports by June 30, 2009 — a deadline that was not met. Collecting exit data turned out to be difficult, since it risked either burdening unwilling airlines with collecting biometrics at passenger check-in, further lengthening lines with biometric data collection at security checkpoints, or accomplishing the task at departure gates not built with this function in mind. DHS tested options for collecting the data at security checkpoints and departure gates during June 2009. DHS did not make a decision in spring 2010 as originally anticipated, however, and indicated that it would not use the $50 million dollars in its FY 2011 budget allocated for biometric air exit. Once a biometric air exit process is in place, the 9/11 Act requires DHS to set a maximum visa overstay rate for VWP membership.

F.   *Challenges Implementing US Border Policies*

To sum up, automated surveillance and dispatching systems, entry systems that integrate databases and watch lists, registered-traveler programs, and automated biometric entry-exit systems all face implementation barriers of some kind. Registered-traveler programs such as Nexus, SENTRI, and Global Entry, have had the fewest barriers to implementation, primarily because they are voluntary in nature and only concern a very small share of traveler flows through border crossing points. Implementation of the first US border-control entry systems faced somewhat higher barriers because using them in primary inspection required international cooperation on standards for machine-readable passports, thereby taking much longer to implement than one would expect given that the systems were in place for more than a decade before they could be fully utilized. Automated biometric entry-exit systems such as US-VISIT face some of the greatest roadblocks to implementation. For systems to work properly, data collection must be comprehensively required of all who enter and exit, but for a system to accurately capture exit data that corresponds to every entry, extensive investments in exit processes and border infrastructure are necessary. Border surveillance and automated dispatching systems seem simple enough in theory but, as DHS's experience with SBI*net* amply demonstrates, they are perhaps the most difficult systems to properly develop and implement; and even if implemented, they may be easily circumvented or countered by smugglers. Such technology implementation difficulties have raised questions within DHS and in Congress as to whether there might be better ways to spend resources in the efforts to reduce illegal migration.

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69   DHS, "DHS Reminds Visa Waiver Program Travelers of ESTA Requirements Effective Today," (news release, January 12, 2009). www.dhs.gov/xnews/releases/pr_1231771555521.shtm.

IV. Conclusion

Rapidly growing cross-border flows of people, goods, and conveyances give rise to formidable challenges to the border-control authorities charged with maintaining states' territorial sovereignty. Much like its counterparts around the world, DHS has confronted the forces of globalization with a strategy of facilitating trade and travel while at the same time increasing security and reducing illegal migration. Enormous increases in border security funding, staffing, and technology deployments since the early 1990s have made it more difficult and more expensive to enter the United States illegally.

Beginning with the "Smart Borders" strategy, the US government has made tremendous investments in technology that have served as force multipliers for the growing ranks of CBP Officers and Border Patrol agents. Yet even the largest of these investments have not been as effective as hoped in stopping illegal border crossers and visa overstayers. Hundreds of thousands of people are still entering or staying in the United States without authorization every year. Largely due to the recent economic crisis, the unauthorized population has dropped by an estimated 1 million from its 2007 peak. Nevertheless, an estimated 10.8 million to 11.1 million unauthorized immigrants remain in the United States. It remains difficult to judge whether hiring more staff versus investing in technology would be more successful in reducing illegal migration. Still, the opportunity costs of spending more on technologies that have yielded relatively low returns on investment must be seriously considered.

Looking forward, questions hang over the use of force-multiplying technology to back up CBP personnel patrolling the border. The capabilities of major programs such as SBI*net* and the exit portion of US-VISIT have yet to be realized, leaving many gaps in the multi-layer border security strategy. Given these shortfalls, the Obama administration cautiously spent much of its first year reevaluating border security programs while maintaining these programs' funding at levels comparable to the final year of the Bush administration. The Obama administration has been carefully weighing the costs of expensive border-control technology programs in relation to less grand "proven technologies." Now, a few changes in policy and direction are becoming evident.

The clearest indication of the future policy trajectory comes from the *Southwest Border Security Act* that President Obama signed into law on August 13, 2010. This appropriation of $600 million in supplemental funds for enhanced border protection and law enforcement activities comes on top of the president's July 2010 authorization to deploy 1,200 National Guard troops to the border. The largest share of this additional funding, some $244 million, is to hire and maintain existing levels of Border Patrol agents and CBO officers. Interestingly, the next largest category is $196 million for the Department of Justice to hire more federal law enforcement officers for the Southwest border region and pay for temporary deployment to high-crime areas, including funding for more than 30 prosecutors and immigration judges. Ranking third is the $80 million for new ICE agents and supporting investments along the border. A relatively small amount is available for technology, with $32 million for two new unmanned aerial detection systems and $14 million for tactical communications to support enforcement activities. Very noteworthy is the fact that this $600 million in supplemental funding is offset by cancelling $100 million from the SBI*net* program and from a temporary increase to the fraud prevention and detection fees charged to employers applying for high-skilled foreign worker visas.

Though the cancellation of SBI*net* is a definitive sign of the program's lost support in DHS and Congress, the administration continues to rely on border surveillance technologies more generally. Nevertheless, SBI*net*'s original plan for 1,800 fixed sensor, radar, and communications towers along the border will not become a reality. There is a strong possibility that we are more likely to see a further shift to surveillance using mobile radar, video, and UAVs in support of larger numbers of Border Patrol agents operating in frontier regions adjacent to the border itself.

And given that Obama, while a senator, voted for the *Secure Fence Act*, it is unlikely that the current administration will abandon efforts to complete the last half-dozen of the 670 miles of physical fencing mandated by legislation, but currently stalled due to legal proceedings.

The future of the US-VISIT program is not in question, by contrast. Members of Congress, however, repeatedly ask the following questions: When will we see biometric exit? When will the system be completed? When will we be able to identify visa overstayers? Given the challenges of implementing biometric exit, combined with the lack of political will to pay for the necessary infrastructure and staffing — or to take political heat from powerful business constituencies and citizens opposing additional data collection by US-VISIT — the answer remains "not in the foreseeable future."

Although the Secure Border Initiative has largely become synonymous with the SBI*net* virtual fence, the original 2005 plan was much more comprehensive in that it also sought "greatly increased interior enforcement of our immigration laws — including more robust worksite enforcement."[70] Worksite enforcement entails investigating and arresting employers who violate the Immigration and Nationality Act (INA), as modified by the *Immigration Reform and Control Act* in 1986 with section 274A, which makes it unlawful for any employer in the United States to knowingly hire, recruit, or refer for a fee, or continue to employ unauthorized immigrants. It also entails arresting illegal migrants who are employed at worksites. The original Border Security Initiative outlined a multi-layered strategy which recognized that border control could not simply occur at the border and that complementary internal workplace enforcement was necessary. This broader understanding of border security was lost in the congressional enthusiasm for appropriating billions for fence building in 2006.

DHS leadership within the Obama administration has accorded a higher priority to workplace enforcement and clearly stated that the emphasis of worksite enforcement would be shifted from arresting and deporting illegal migrant workers in large raids to the more difficult task of prosecuting the employers who break the law by knowingly hiring unauthorized workers. Reducing the demand for illegal migrant workers, prosecuting law-breaking employers, and increasing investments in worksite enforcement should reduce illegal migration much more than increasing the already high spending on border fences, physical or virtual.[71]

Moreover, there has been a tendency among some members of Congress to express support for the physical and/or the virtual fence in terms of providing "operational control of the border" as a prerequisite for comprehensive immigration reform. Yet illegal migration is probably more a function of demand for illegal migrant labor than it is a function of fencing. Immigration policy reforms that reduce this demand would lessen the flows of those attempting to cross illegally, and potentially enable CBP to gain operational control of the border, rather than the other way around.

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70   DHS, "Secure Border Initiative Fact Sheet."
71   See Rey Koslowski, "Worksite Enforcement and E-Verify as Means of Border Control," working paper manuscript.

Appendices

Appendix 1. Nonimmigrant Admissions (I-94 only) by Category of Admission, FY 2006-2009

	2009	2008	2007	2006
Nonresidents	32,544,098	35,434,175	33,301,754	30,198,154
Temporary visitors for pleasure	27,800,02	29,442,168	27,486,177	24,788,438
Temporary visitors for business	4,390,888	5,603,668	5,418,884	5,030,779
Transit aliens	346,695	387,237	396,383	378,749
Commuter students	6,488	1,102	310	188
Short-term residents	3,438,276	3,688,167	3,566,367	3,170,056
Temporary workers and families	1,703,697	1,949,695	1,932,075	1,709,268
Students	951,964	917,373	841,673	740,724
Exchange visitors	459,408	506,138	489,286	427,067
Diplomats and other representatives	323,183	314,920	303,290	292,846
Other	24	41	43	151
Expected long-term residents	53,019	59,097	76,158	76,783
Fiancés of US citizens and children	32,009	34,863	38,507	34,947
Spouses of US citizens and children	15,515	15,694	18,495	18,431
Spouses of US permanent residents & children	5,445	8,478	19,099	23,348
Other	50	62	57	57
Unknown	196,161	200,489	205,372	222,335
Total	**36,231,554**	**39,381,928**	**37,149,651**	**33,667,328**

Source: Non-Immigrant Admissions 2009 Annual Flow Report (Washington, DC: DHS Office of Immigration Statistics, 2010); *Non-Immigrant Admissions 2008 Annual Flow Report* (Washington, DC: DHS Office of Immigration Statistics, 2009).

Appendix 2. Passenger Inspections, 2000-2007
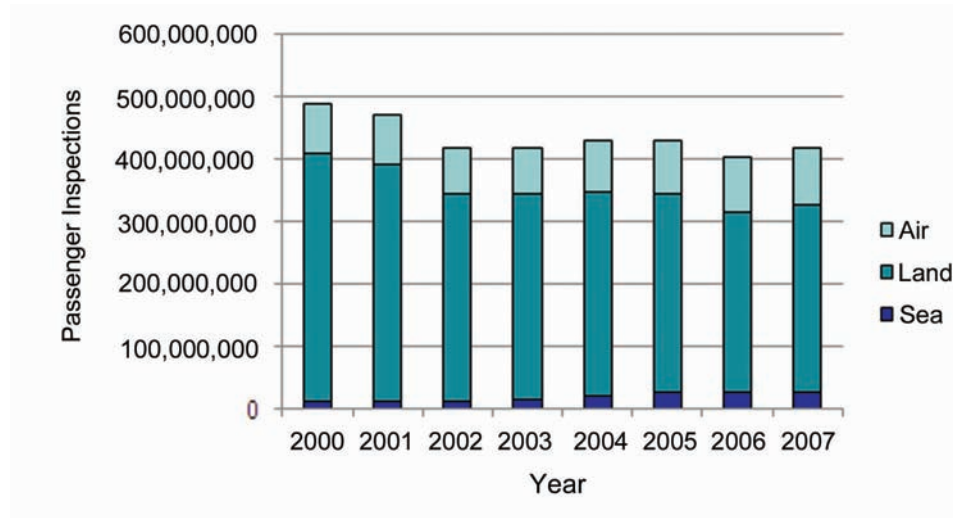
Source: CBP, "National Workload Statistics,**"** June 20, 2008.
www.cbp.gov/xp/cgov/about/accomplish/previous_year/national_workload_stats.xml.

Appendix 3. Conveyance and Cargo Inspections, 2000-2007

Fiscal Year	Air		Land			Sea	
	Commercial Plane	Private Plane	Auto	Rail Containers	Truck Containers	Vessels	Vessel Containers
2007	916,276	139,030	112,427,647	2,737,149	11,459,190	169,908	11,702,610
2006	880,910	139,029	119,372,495	2,735,335	11,488,842	168,222	11,621,658
2005	866,346	135,388	121,653,980	2,655,410	11,308,498	113,235	11,340,832
2004	823,757	139,964	121,418,881	2,587,565	11,252,209	142,152	9,796,282
2003	789,805	132,147	120,376,489	2,471,902	11,163,090	203,635	9,092,306
2002	768,879	129,243	118,306,795	2,430,107	11,129,390	211,575	7,247,624
2001	839,221	125,721	129,603,189	2,257,147	11,001,461	215,415	5,943,985
2000	829,318	145,572	127,094,722	2,156,537	10,396,641	211,242	5,813,244

Source: CBP, "National Workload Statistics," June 20, 2008.
www.cbp.gov/xp/cgov/about/accomplish/previous_year/national_workload_stats.xml.

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