

FALLACIES OF HIGH-TECH FIXES FOR BORDER SECURITY

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EXECUTIVE SUMMARY

In the aftermath of the September 11, 2001 terrorist attacks, President George W. Bush created the Department of Homeland Security (DHS). The new department promised *border security* over traditional border-control operations.

Rushing to secure the borders, the abundantly funded DHS nearly tripled the number of Border Patrol agents, fortified ports-of-entry, built a highly controversial border wall and quickly opted for several high-tech initiatives to patrol the border with virtual eyes.

DHS rushed ahead with its two remote surveillance initiatives—the SBInet program (commonly known as the “virtual fence”) and the Unmanned Aerial Vehicle (UAV) program—without having a detailed or focused border security strategy in place. Not only did this expedited border security lack a strategy, but it also lacked a foundation of successful experience in high-tech border control. Instead, it has been based more on dreams, hopes and fantasy—and on the widely shared, but faulty, assumption that technology provided by private contractors could meet the challenge of securing the country’s nearly 6,000 miles of land borders with remote surveillance systems.

Customs and Border Protection (CBP), the DHS agency in charge of border security, states it is committed to “a comprehensive and systemic upgrading of the technology used in controlling the border.” But the new agency lacks the oversight and management capacity, in-house technological expertise, and the necessary commitment to direct and operate its proposed high-tech solutions.

CBP professes its commitment to protecting the

homeland against the entry of “dangerous people and goods.” Yet it lacks a strategy that prioritizes actual threats. Its high-tech initiatives, like the entire Secure Border Initiative (SBI) endeavor, which encompasses the two main high-tech border security programs, are shockingly unfocused and nonstrategic.

Even when the immensely expensive technological surveillance occasionally does work, CBP’s high-tech web catches only illegal border crossers looking for work or carrying backpacks of marijuana. These arrests and drug seizures are certainly not the reason the Department of Homeland Security was created and cannot justify the continuing depletion of the U.S. treasury in the unfocused post-September 11 quest for border security.

Trying to stand by its promise to gain “operational control” over the land borders, DHS hurriedly turned to high-tech fixes for border security. But DHS’s hasty commitment to remote surveillance technology—such as virtual fences and drones—has been symptomatic of the new department’s apparent confidence that there would be unlimited funding for border security and that its operations would not be subject either to cost-benefit analysis or to evaluations of the impact on homeland security. Rather than being guided by threat assessments, they have been experiments in technological wish fulfillment.

This *International Policy Report* examines the failed SBInet and UAV programs. Sidebars in the report examine the support of high-tech fixes for border security by liberal sectors and the role of congressional supporters of UAVs. A final section includes conclusions and recommendations.

- ***HOW MUCH IS CATCHING ONE UNAUTHORIZED IMMIGRANT WORTH?***
- ***OR CONFISCATING ONE POUND OF MARIJUANA?***

These are questions that have never been asked by the Department of Homeland Security (DHS). To attain what DHS calls “operational control” over the U.S. borders, no expense is spared—and, apparently, little oversight, management or planning are required.

Since the terrorist attacks of September 11, 2001 the United States has rallied around the undefined concept of “*border security*,” which encompassed operations previously described as *border control*. High-tech border security programs existed prior to September 11. But since the terrorist attacks, the control of the country’s land borders has been deemed a matter of U.S. national security. The surge in Border Patrol agents, the fortification of the ports-of-entry, and the construction of a 670-mile border fence have been the most visible manifestations of the border security boom. But little attention—or government oversight—has been focused on the high-tech and shockingly expensive components of DHS’s Secure Border Initiative (SBI).

Like most national security funding, border security budgeting is rarely constrained by fiscal discipline, cost-benefit assessments or contractor oversight. As a result, the government’s purse has been pried wide open to fund high-tech projects operated by such private contractors as Boeing and General Atomics.

Customs and Border Protection (CBP), the DHS agency that includes the Border Patrol, states it is committed to “a comprehensive and systemic upgrading of the technology used in controlling the border, including increased manned aerial assets, expanded use of UAVs, and next-generation detection technology.”

Immigration restrictionists and anti-immigrant nationalists have long been demanding that the federal government secure the southwestern border against the much-hyped invasion from the south. Since September 11, governmental and business homeland-security advo-

cates have been insisting that no cost should be spared to stop what DHS calls “dangerous people and goods” from entering the country either from the south or north.

Even the leading liberal immigration reformers have joined the border security bandwagon. They generally regard increased border controls as a necessary foundation to gain bipartisan support for comprehensive immigration reform. High-tech solutions for border security are the highly preferred border security solution. Unlike the border fence, electronic surveillance and drones aren’t unsightly, don’t have much of an environmental impact and are commonly regarded as the only way to monitor the vast stretches of northern and southern borderlands.

During their campaigns, Democratic Party presidential candidates Barack Obama and Hillary Clinton—backing away from earlier support for the border fence (both voted for the Secure Border Fence Act of 2006)—asserted that technological surveillance is the preferable border security solution. As candidate Obama said during the February 21, 2009 presidential debate: “There may be areas where it makes sense to have some fencing. But for the most part, having Border Patrol, surveillance, [and] deploying effective technology—that’s going to be the better approach.”

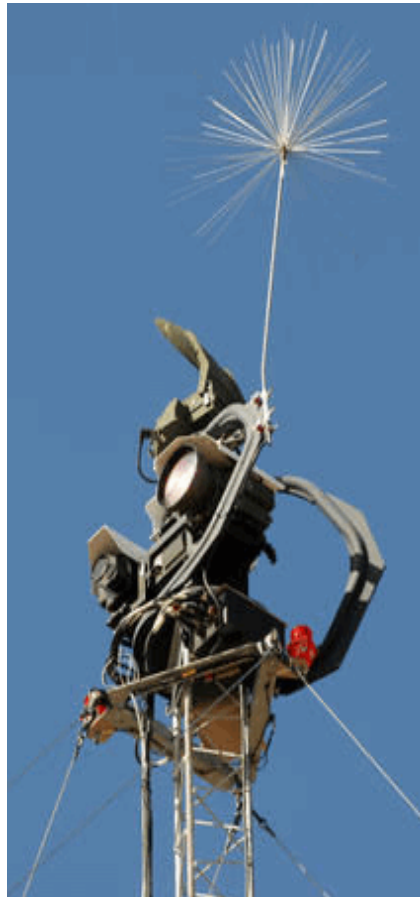
I. SBINET—THE “SYSTEM OF SYSTEMS”

The Secure Border Initiative, announced by DHS Secretary Michael

Chertoff in November 2005, is grandiose, multidimensional and unfocused. Framed from the start as a border security initiative, Chertoff said that SBI would ensure “operational control” of U.S. land borders in five years—by the end of 2010.

Yet SBI has been described in ways that transcend mere border control. More than a strategy or plan, SBI is a state of mind that no longer limits the concept of border-control operations to the border. It is, as described by DHS, “a departure from traditional ways of thinking about border security.”

According to former Border Patrol Deputy Chief Ronald Colburn:



SBINET SURVEILLANCE TOWER

SBI calls for a new, transformational approach to border security. The border is not merely a physical frontier, and effectively securing it requires attention to processes that begin far outside U.S. borders, occur at the border, and continue to all regions of the United States. SBI brings a systems approach to meet this challenge; its mission is to integrate and unify the systems, programs and policies needed to secure the border and efficiently enforce.

As part of its new Secure Border Initiative, DHS launched a high-tech component called SBInet in April 2006. CBP described SBInet as a critical component of DHS's "plan to launch a comprehensive program to transform border control technology and infrastructure." According to CBP:

The goal of *SBInet* is to field the most effective mix of current and next-generation technology, infrastructure, staffing, and response platforms. *SBInet* will integrate multiple state-of-the-art systems and traditional security infrastructure into a single comprehensive border security suite for the department.

It was to be a "system of systems," according to DHS. Typical of the abstract language describing the SBInet concept, DHS said it represented "a systematic approach to deploy technological tools in stages, allowing each stage to build on the success of earlier stages." And the objective is "to provide a clear common operating picture (COP) of the border environment within a command center environment, which will provide commonality within DHS components and interoperability with stakeholders outside DHS."

Year after year, the Border Patrol offered blithe assurances to Congress, to the Government Accountability Office (GAO), to its own inspector general and to the public that SBInet was progressing. But it never offered any clear definition of the project, a credible price estimate or strategic plan.

The lack of details about SBInet and the obfuscation by the Border Patrol have made it exceedingly difficult for the media to report on the project and help explain the lack of news reporting on SBInet over the past three and a half years.

Border Patrol Chief David Aguilar assured lawmakers in 2007 that, despite some technical glitches, there was no question that that SBInet would be successful. "SBInet will utilize the latest innovative technology—

cameras, biometrics, sensors, air assets, improved communications systems—to provide the force multiplier that the CBP agents and officers need to execute the agency's mission in the safest and most effective manner," he said.

But assurances from CBP and Border Patrol officers have faced the constant skepticism of DHS Inspector General Richard Skinner, who told the House Oversight and Government Reform Committee in late 2006: "Our main concern about SBInet is that DHS is embarking on this multibillion-dollar acquisition project without having laid the foundation to effectively oversee and assess contractor performance and effectively control cost and schedule."

One of the most dubious parts of the fiction of this "system of systems" is the Border Patrol's claim that its own officers could manage SBInet from "operations integration centers" and "command control centers" that would integrate sensors, cameras, microwave relays, and communications with field officers in a seamless system.

What is more, the entire SBInet system would be fully integrated with all other Border Patrol communications systems into an envisioned "common operating picture." As part of the technological dreaming, the Border Patrol established, copying the military, a SBInet division for Command, Control, Communications, and Intelligence (C3I) projects—all based on technological and communication systems that were imaginary.

Four years after SBInet launched, the components of the system are being tested, and a series of highly critical reports by the GAO and the DHS inspector general have created deep skepticism about SBInet's future. Shortly before the release of the latest GAO report slamming SBInet management, DHS Secretary Janet Napolitano called a halt to plans to extend the ground-based remote-surveillance initiative beyond the ongoing test site along a small stretch of the Arizona border. The folly of SBInet, which has cost some \$850 million, and the SBI umbrella project underscore the inadvisability and political opportunism of the ambitious, but stunningly unfocused, border security goals of DHS.

A Contract Without Specifications

In 2006, DHS posted a request for proposals for SBInet, but DHS Secretary Chertoff had only the



SBINET COMMAND CENTER

vaguest conception of what type of electronic surveillance project DHS was seeking; DHS knew only that it wanted a technical infrastructure system to complement the two other components—tactical infrastructure (mainly border fence) and personnel (Border Patrol agents)—of SBI. So instead of issuing a project “statement of objectives” with specific specifications, DHS asked prospective contractors to create their own vision for the project.

As ordered, the Contractor will provide solutions that include the full range of services, products and management required to ensure accomplishment of the SBI net program objectives. This includes addressing all components of border security in conjunction with the program objectives, developing solutions based upon the optimum mix of personnel, processes, infrastructure and technology, and deploying the solutions to move from our current border strategy to one where the defined border areas are effectively secured.

Rather than specifying what metrics will be used to judge the product, DHS let out a “performance-based” contract for a projected \$2 billion over three years. Once the contractor put a prototype in place, it would then be awarded an extended contract—estimated to be under \$8 billion for the southwestern border and more than \$30 billion for both southern and northern borders. But these estimates were wild guesses—with absolutely no grounding in facts or expense budgets.¹

Boeing, with its proposal for a network of 1,800 towers, was awarded a three-year, “Indefinite-Delivery,

Indefinite-Quantity” contract. DHS, in other words, left it completely up to Boeing to create the secure border net. DHS publicly announced the contract award to Boeing at a September 26 news conference where Secretary Chertoff tried to explain to inquiring reporters what exactly SBI net was going to be:

What we are looking to build is a virtual fence, a 21st century virtual fence—to be sure, one that does involve old-fashioned fencing and tactical infrastructure, but also one that involves proven tools that have been used not only in this country but around the world to help us identify intrusions, characterize the intrusions across the border, and allow the Border Patrol authorities to interdict and apprehend those who are coming across the border illegally as effectively as possible.

In a November 15, 2006 statement, DHS’s inspector general critically described the contract as “leaving the work tasks and deliverables largely undefined until the government negotiates a specific delivery task order.”

SBI net Follows History of High-Tech Surveillance Failures

The scandal of insider contracts, scant oversight, and technological failure in electronic surveillance on the border predates SBI net.

Between 1997 and 2006, the Department of Justice (DOJ) and DHS spent \$439 million on two electronic surveillance projects that were largely abandoned because of system failures. These were the Integrated Surveillance Intelligence System (ISIS) and its successor, America’s Shield Initiative.

The General Services Administration and DHS’s Office of Inspector General (OIG) issued blistering reports about ISIS and America’s Shield, prefiguring more recent governmental critiques of SBI net. The OIG concluded:

We determined that more than 90 percent of the responses to sensor alerts resulted in ‘false alarms’—something other than illegal alien activity, such as local traffic, outbound traffic, a train, or animals. On the southwest border, only two percent of sensor alerts resulted in apprehensions; on the northern border, less than one percent of sensor alerts

resulted in apprehensions.

Like SBInet, the Border Patrol's earlier electronic surveillance projects claimed that they would be a "force multiplier," meaning that the technological barrier increases the efficiency and impact of individual agents.

But the DHS report of December 2005 found the Border Patrol was "unable to quantify force-multiplication benefits" and noted among the many flaws of ISIS was that the project was badly undermanned, especially in monitoring the output of the surveillance system.

Technical glitches have plagued SBInet from the beginning. A March 18, 2010 GAO report concluded that "the number of new SBInet defects that have been

discovered during testing has increased faster than the number that has been fixed." The GAO report found that testing was so poorly managed that 70 percent of the performance tests of the SBInet surveillance system in Arizona were rewritten as they were given, often to ensure success. Nonetheless, the most recent series of tests found more than 1,300 defects in the system.

Aware that yet another GAO report would find that SBInet was flailing and that CBP oversight was not improving, Secretary Napolitano ordered the freezing of SBInet and a complete reassessment of the project. Napolitano observed that SBInet was "plagued with cost overruns and missed deadlines." Boeing and CBP

CONGRESSIONAL SUPPORT FOR HIGH-TECH BORDER SECURITY

The massive outlays of DHS dollars for high-tech fixes, like the so-called virtual fence and the deployment of UAVs (Unmanned Aerial Vehicles), have sparked little or no public opposition—in marked contrast, for example, to the surge of opposition to the border fence from community groups, environmentalists, and immigrant-rights organizations.

Environmental organizations like the Sierra Club have positioned themselves on the side of aerial and electronic surveillance while opposing the border wall and the setting aside of environmental impact statements in the name of border security. The organization's Borderlands Campaign, for example, urged those who opposed the border wall to support the "Border Security and Responsibility Act of 2009."

The "Border Security and Responsibility Act of 2009," a bill introduced by Rep. Raul Grijalva (D-Ariz.), "provides guidance to move toward a more sane and just border policy." The bill calls for the end of the construction of the border fence (authorized by the Security Border Fence Act of 2006) while advocating "giving priority to the use of remote cameras, sensors... additional manpower, unmanned aerial vehicles, or other low impact border enforcement techniques."

The "Comprehensive Immigration Reform for America's Security and Prosperity" (CIR ASAP), introduced by Rep. Luis Guitierrez (D-Ill.), is widely deemed, even by its advocates, as too left-of-center to be seriously considered by Congress. Yet even this progressive bill, which counts on the strong support of the Hispanic Caucus and the Progressive Caucus, attempts to bolster the security credentials of CIR advocacy with its backing of high-tech, immensely expensive and unproven border-security strategies.

A summary of the bill provided by Gutierrez's office states that CIR ASAP "minimizes wasteful spending by developing and studying comprehensive uses of advanced technologies, such as aerial and automated surveillance." The Gutierrez CIR bill proposes that DHS should develop "a comprehensive plan for the systematic surveillance of the international land and maritime borders of the United States."

According to this CIR bill, which is the only one that has been introduced, DHS should take acts "to gain operational control of the international land borders of the United States." To do this, the DHS secretary should "give first priority to the use of remote cameras, sensors, removal of nonnative vegetation, incorporation of natural barriers, additional manpower, unmanned aerial vehicles, or other low impact border enforcement techniques."

What is more, CIR ASAP recommends that the secretary of defense consider increasing "the availability and use of Department of Defense equipment, including unmanned aerial vehicles, tethered aerostat radars, and other surveillance equipment, to assist the Secretary in carrying out surveillance activities conducted at or near the international land borders."

will, however, proceed with the full deployment of the surveillance system in the 28-mile stretch of the Arizona border. Announcing the departmental review of SBInet, Napolitano said, “Americans need border security now—not 10 years down the road.”

Signaling that DHS remains committed to a technological solution for border control, Napolitano said on March 16 that the \$50 million in economic stimulus funds that DHS had committed to SBInet less than a year ago (when SBInet was already plagued with cost overruns, missed deadlines, and haphazard oversight) would be transferred to other surveillance technology. Napolitano said that the economic stimulus funding would be used for mobile surveillance, thermal-imaging devices, body scanning units, mobile radios, cameras and laptops for pursuit vehicles. She didn’t explain how this transfer of funds would stimulate the economy and provide jobs, only saying that it would be used for proven technology.

Border politicians and other border security proponents, alarmed by intensifying drug-related violence in northern Mexico, quickly took Napolitano and the DHS to task for what they perceived as an inadequate commitment to securing the border. Following Napolitano’s SBInet evaluation announcement, Representative Michael McCaul (R-Tex.) on March 18 said, “We can’t afford a time-out” to re-evaluate SBInet, noting that SBInet surveillance had led to the capture of a half-dozen marijuana smugglers. An analyst with the right-wing Heritage Foundation also expressed alarm about drug violence in Mexico, writing on March 18: “This means that now is the time for technology to finish the process of securing the border and fighting back against this violence.”

Not Just About Tech Glitches

The SBInet fiasco is not just a matter of technological glitches. Given the Border Patrol’s tendency—starting in 1997 with ISIS—to hand over its electronic surveillance projects to contractors with little accompanying direction or oversight, the pattern of contractor abuse and failure is predictable. Indeed, year after year the government’s own reviews of these projects have clearly detailed their systemic flaws. These reviews highlight departmental over-reliance on contractors—not only to carry out departmental functions but also, alarmingly, to oversee properly the management and outsourcing of these technological wish-fulfillment projects.

On Feb 8, 2007, Representative Henry Waxman (D-Cal.) and the majority members of the Committee on Oversight and Government Reform issued a statement of concern about the lack of DHS control over SBInet, underscoring a department-wide crisis in unmonitored outsourcing. The statement observed: “It appears that private contractors hired by the Department played leading roles in contract planning and contract award, and will now constitute the majority of the staff engaged in contract management and oversight.”

Closely related and contributing to this outsourcing crisis at DHS was the large annual budget increases and supplementary allocations enjoyed by the department between 2003 and 2010—with no congressional or executive branch requirements that DHS demonstrate its success in targeting “dangerous people and goods.” In the post-September 11 enthusiasm for border security, DHS in effect handed over its authority, oversight, and budget to Boeing for this dream of a high-tech fix for border security.

II. PREDATORS ON OUR BORDERS

Predator drones are patrolling the borders, hunting for illegal border crossers and payloads of smuggled marijuana. By 2015 the Department of Homeland Security intends to have the northern and southern land borders, as well as U.S. maritime borders, fully monitored by Unmanned Aerial Vehicles (UAVs).

Most of the Predators owned by the U.S. government are in the hands of the Department of Defense (DoD) and the U.S. military and CIA deploy many in Iraq, Afghanistan, and Pakistan. But outside these shooting wars, UAVs—also known as Unmanned Aerial Systems (UASs)—are being increasingly regarded by DHS as part of its high-tech strategy for border security.

Customs and Border Protection claims that its UAV program “focuses operations on the CBP priority mission of anti-terrorism by helping to identify and intercept potential terrorists and illegal crossborder activity.”

But the assertion that the UAV program is driven by CBP’s priority mission of counterterrorism has not been supported by the short history of UAV deployment since 2004, and is certainly not supported by the results of the aerial surveillance. Occasional news releases from CBP about its UAV program cite the

number of illegal immigrants detained and pounds of marijuana seized.

Like SBInet, the UAV program of CBP, which is run by the agency's Office of Air & Marine, is proceeding without adequate oversight, with no cost-benefit evaluation, in apparent contradiction with the agency's professed "risk-based" mission, and without any defined border security strategy. What is more, CBP has not yet produced the documentation to back its claim that its UAV program is a "force multiplier"—meaning that it enables Border Patrol to do a better job with fewer agents.



PREDATOR DRONE OVER ARIZONA

Eyes in the Sky

The U.S. Border Patrol began considering the utility of UAVs in the late 1990s, about the same time it began deploying the first electronic surveillance system. But it wasn't until after the terrorist attacks of September 11, 2001—and the flood of new funding for border security through the newly created DHS—that CBP's UAV program really took off.

Today, CBP has a fleet of six Predators,² with another scheduled for acquisition in 2010. Manufactured by the San Diego-based General Atomics, the Predator UAV includes a sensor system provided by Raytheon. While some UAVs are on automatic pilot, most of the UAVs used for border security and military operations are remotely piloted, relying on satellite relays to communicate.

Before purchasing its first Predator in 2005, CBP in 2004 and 2005 experimented along the southwestern border with two other drones—the Israeli-made Hermes and Northrop Grumman's Hunter—as part of its Arizona Border Control Initiative.

Both experiments were deemed successful, although the criteria used to judge the program were not specified. CBP merely cited the number of immigrants arrested and pounds of drugs captured as evidence of its success.³ Quickly following these UAV pilot projects CBP began the operational use of the first Predator in October 2005.

Seven months later, CBP's first Predator crashed, apparently due to pilot error. The April 2006 Predator crash was a reminder of the high crash rate of UAVs—100 times higher than manned aircraft.⁴

According to a May 2008 review of DHS's UAV program by the Congressional Research Service:

Because UAV technology is still evolving, there is less redundancy built into the operating system of UAVs than of manned aircraft and until redundant systems are perfected mishap rates are expected to remain high. Additionally, if control systems fail in a manned aircraft, a well-trained pilot is better positioned to find the source of the problem because of his/her physical proximity. If a UAV encountered a similar system failure, or if a UAV landing was attempted during difficult weather conditions, the ground control pilot would be at a disadvantage because he or she is removed from the event. Unlike a manned pilot, the remote pilot would not be able to assess important sensory information such as wind speed.

Thus far DHS's UAV program functions as a joint undertaking with DoD, which allows DHS to use its bases in the borderlands for UAV command centers and has assisted DHS in accessing airspace.

The latest Predators purchased by CBP—called Guardians—are slated for sea duty. The sixth CBP UAV will patrol the Caribbean while the one scheduled to come on line in 2010 will watch over the Gulf

DRONE LOBBY IN CONGRESS

Since the start of DHS's drone program, it has counted on the strong support of the Congressional UAV Caucus, whose mission is to "educate members of Congress and the public on the strategic, tactical, and scientific value of UAVs, actively support further development and acquisition of more capable UAVs, and to more effectively engage the civilian aviation community on UAV use and safety." Congressional representatives in this 33-member caucus include Howard "Buck" McKeon, Duncan Hunter, Silvestre Reyes, Alan Mollohan, Jerry Lewis, and Brian Bilbray. Representative McKeon, the Republican congressman who represents the San Diego-area district that is home to Predator manufacturer General Atomics, is the leading voice of the new congressional caucus and a regular beneficiary of company-sponsored international trips to promote UAVs.

Caucus members say they are working with "the military, industry, NASA, DHS, and FAA to seek fair and equitable solutions to the challenges created by UAV operations in the U.S. national air space," as well as supporting "policies and budgets that promote a larger, more robust national security UAV capability."

Congressional UAV proponents are not working alone. The newly created industry association intended to parallel the UAV Caucus, the Unmanned Aerial Vehicles Systems Association (UAVSI), has its own congressional advocacy committee and sponsors events. In close cooperation with members of the Congressional UAV Caucus, UAVSI sponsors an annual UAVSI Action Day on Capitol Hill, and congressional tours of UAV manufacturing facilities. In addition the UAV National Industry Team (UNITE) formed in 2002 to promote expanded UAV use. Its leading members are General Atomics, Boeing, Lockheed Martin and Northrop Grumman.

The principal market for UAVs is the military. Drone purchases accounted for more than one-third of the Air Force's proposed 2010 aircraft budget. While the Predators have thus far been favored by DoD and DHS, other military contractors, notably Northrop Grumman and Lockheed Martin, are seeking to make more inroads into this booming market with its own UAVs.

Congress has passed a flurry of laws and budget authorizations to foster UAVs. In 2003, Congress directed DHS to study the feasibility of using UAVs, and has repeated this directive in numerous instances since then. The 2003 DoD Authorization Act (P.L. 108-136) required the president to issue a report "on the use of unmanned aerial vehicles for support of homeland security missions." As part of the 2007 appropriations bill, Congress urged DHS to work with the FAA to implement a pilot program that would use UAVs for surveillance on the northern border.

Along the southern border, politicians such as Texas Governor Rick Perry and congressional members such as Henry Cuellar (D-Tex.) and Silvestre Reyes (D-Tex.) are increasingly vocal about the need for UAV surveillance, mirrored on the northern border by North Dakota's Democratic senators Byron Dorgan and Kent Conrad.

of Mexico. CBP says will ultimately be used to patrol off the coasts of Central America and Mexico.

CBP Assistant Commissioner for the Office of Air & Marine Operations Michael Kostelnik said, "With the introduction of the Guardian, maritime variant of the Predator B, DHS now has a powerful tool and force multiplier to increase maritime domain awareness and confront threats to our borders."

By 2015, CBP says it expects to employ the Predator across the entire southern and northern border regions operated by UAV ground command stations across the

country.

Border Drone Payload—Marijuana at \$70,000 a Pound but Immigrants Come Cheaper

The enthusiasm for UAV deployment in homeland security—particularly border security operations—has not been tempered by the obstacles and problems associated with UAVs, including high crash rates, airspace constraints, high cost, and lack of focus on high-priority targets when used for intelligence rather than attack.

Instead of assessing the appropriateness and effec-

tiveness of its UAV program, CBP highlights how its aerial surveillance has contributed to stopping illegal border crossers and illegal drugs from entering the country—categorized broadly by DHS as “dangerous people and goods.”

The Predator—whose latest version is called the Reaper, or the MQ-9—has proved most valuable in search-and-destroy military missions rather than in intelligence missions.⁵ In its *Unmanned Systems Integrated Roadmap*, which projects potential UAV use over the next three decades, DoD says that the primary mission of the Reaper is “to act as a persistent hunter-killer for critical time-sensitive targets and secondarily to act as an intelligence collection asset.”

However, Homeland Security uses UAVs exclusively for intelligence, not hunting. While their cameras do pick up the targets—mainly illegal border crossers—the UAVs can’t hunt them down. The images must be transferred by satellite to the command and control centers for processing by industry operators and Border Patrol agents.

Per Unit Costs

Since 2005, the costs of the UAV program have steadily increased and the benefits have steadily decreased. In 2005, DHS’s first Predator system cost \$14 million. The second CBP contract with General Atomics for two UAVs cost \$34 million.

At the initial price of \$14 million, the UAV program costs U.S. taxpayers about \$7,800 to catch each illegal border crosser.⁶

Measured in terms of the confiscated marijuana, the UAV program costs U.S. taxpayers roughly \$70,000 to help the Border Patrol seize each pound of the smuggled illegal drug.

Before the first Predator crashed, after 959 hours on patrol, CBP said it contributed to 1,793 arrests of illegal border crossers and the seizure of 200 pounds of marijuana, according to a report on the April 26, 2006 crash in the *Arizona Daily Star*.

Despite having at least three more Predators deployed in the 2006-2009 period, the number of arrests and seizures aided by UAVs did not experience a corresponding rate of increase. Arrests doubled over the next three years, while seizures of marijuana increased about 175%—reaching 3,900 arrests and 13,660 pounds of marijuana by March 2007, and by early 2009, more than 4,766 arrests and 22,823 pounds of marijuana.

In addition to the high cost of the arrests and seizures attributed to UAV assistance, what also stands out about CBP’s UAV program are two trends: 1) the only drug seized has been marijuana, and 2) the slow rate of increase in UAV operational time despite the higher number of UAVs.

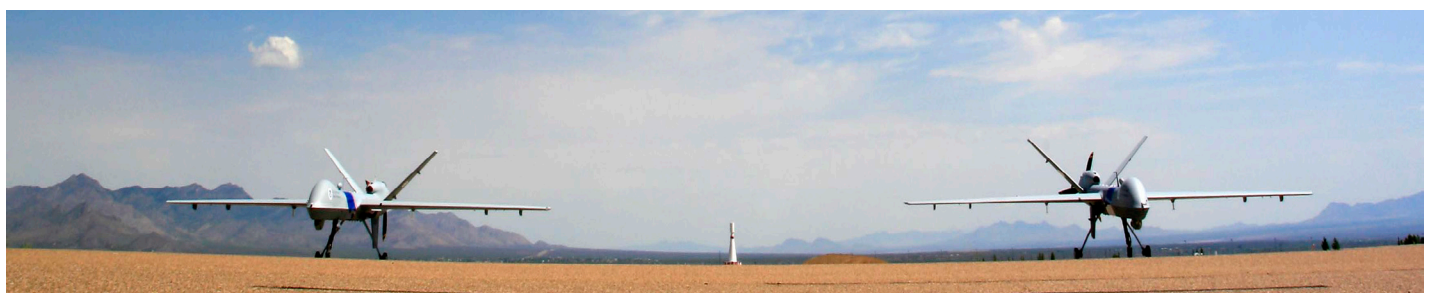
CBP says it maintains a “risk-based” standard for its drug seizure operations. But in the case of the UAV program, the drones only aided Border Patrol agents seize the least harmful (indeed many medical and psychological experts assert that marijuana can actually be beneficial if properly used) of illegal drugs.

Which makes sense, of course, since marijuana, being bulkier and also less valuable in the market, is routinely smuggled across the border by “mules” on foot, while more care and expense is generally given to smuggling heroin and cocaine using planes and vehicles legally crossing through ports of entry.⁷

Unmanned Aerial Vehicles with Little Air

During the lifespan of the first Predator at CBP, the drone flew nearly 1,000 hours, but with a fleet of at least three and as many as five drones over the next three years, flight time increased by only some 2,000 hours. This slow pace of increasing UAV flight time is not unexpected.

DHS has been wishing and hoping that the mounting combined pressure from DoD, the UAV industry, Congressional UAV Caucus, and Homeland Security itself would result in the opening of more public air space to UAV deployments at home. As it is, DHS’s use of



UAVs relies on military bases for their command centers, military airspaces along the border, and special arrangements between DoD, DHS, and the FAA for flights that penetrate national airspace.

DHS says it is working closely with DoD and the FAA to “remove current flight restrictions on Border Patrol Southwest border operations” and its use of national airspace. One possible solution being explored by DHS’s Science & Technology division is to install sense-and-avoid capabilities on UAVs that would automatically redirect UAV flights away from other air traffic.

Among its other objectives, the Congressional UAV Caucus is pressuring for “UAV-friendly laws” that would permit UAVs to be deployed freely in national airspace.

DoD has taken the lead in the drive to change FAA regulations to allow UAV use. A DoD directive on September 26, 2006 encouraged military unarmed UAV support domestically for homeland defense and defense support of civil authorities. The Pentagon’s determination to introduce greater UAV use for nonmilitary use at home is evident in its FY2009-FY2034 *Unmanned Systems Integrated Roadmap*.

Until FAA, DoD, DHS and the UAV industry establish comprehensive guidelines for UAV use of national airspace, FAA and DoD are incrementally expanding UAV flight permission, starting with the segregated airspace above military bases and extending to certain low-density airspaces such as the Arizona border. According to one assessment by a U.S. Army War College study, UAV are “increasingly ranging outside restricted military airspace as demand for a persistent airborne presence grows.”

Force Multipliers Don’t Add Up

Customs and Border Enforcement, the Homeland Security agency that includes the Border Patrol, claims that Unmanned Aerial Vehicles are a “force multiplier.” CBP has made the same assertion about ground-based remote surveillance systems, starting in the late 1990s with ISIS, continuing through the America’s Shield Initiative, and most recently with SBInet. It has not, however, been able to support this claim.

General Atomics’s founder and CEO, Thomas Cassidy, makes the same force-multiplier boast. “The partnership between General Atomics and DHS/CBP has served as a force multiplier to the existing south-

west border domain awareness capability, providing a dramatic increase in the ability of CBP to monitor our borders,” stated Cassidy in a press release announcing the second DHS Predator UAV contract.

A December 2005 report by DHS’s Office of Inspector General cast doubt on the Border Patrol’s force-multiplier argument for UAVs. Based on the experience with the Hermes and Hunter UAVs, OIG found that operating one UAV requires a crew of 20 support personnel, not counting the number of Border Patrol agents involved in tracking down UAV-supplied surveillance videotape in the field.

OIG also found that the cost of operating a UAV is “more than double the cost of manned aircraft.” Furthermore, the use of UAVs “has resulted in fewer seizures.” The same December 2005 OIG report also noted: “During interviews with Border Patrol officials at headquarters and in the sector offices, we were told that remote surveillance technology was a force multiplier. However, [the agency] could not provide any quantifiable data to support this claim.”

Additionally, the DHS inspector general observed that UAVs were less effective, in their limited tests, than manned aircraft in supporting the apprehension of unauthorized aliens. According to the OIG report, the Border Patrol tapped UAVs to assist in the apprehension of illegal immigrants who had already been detected by other means—creating new doubts about how the accuracy of Border Patrol statements that contend that UAVs play a *central* role in immigrant arrests and marijuana seizures.

When OIG released this disturbing report contrasting Border Patrol claims about the value of high-tech instruments of border security with the reality of their shortcomings and high costs, the Department of Homeland Security was on the cusp of greatly expanding both its ground and air surveillance systems.

However, instead of slowing down the development of these programs or calling for a major reassessment of its high-tech surveillance programs, CBP has kept pushing ahead, buoyed by seemingly unlimited congressional and executive branch support for all its border security programs, whether cost-effective or not.

The advantages to the military of deploying armed UAVs—saving pilot lives in search-and-destroy missions in war zones—are manifest (albeit highly controversial). Less clear are the advantages of using

unarmed UAVs for nontargeted information gathering along the border.

CBP boasts of the speed and potential flying time of UAVs, but says nothing about their high cost, high accident rate, and fundamental dependence on industry and Border Patrol crews to interpret data and act on that data. In contrast to manned low-flying small planes and helicopters, whose pilot can quickly identify suspected illegal border crossers, a UAV needs a team on the ground to interpret data, thereby slowing the Border Patrol's response.

III. CONCLUSION

High-tech border security has been mostly a matter of technological wish-fulfillment policymaking. The Department of Homeland Security has pursued high-tech border security programs since 1997 with little or no evidence that they are technologically feasible and with scant regard for their high price tags.

DHS says that its border-control and immigration-enforcement programs are "risk-based." However, it has not issued work orders or program guidelines that ensure that these massively expensive programs stop truly dangerous people and goods from entering the country. Instead, when functioning the surveillance has mostly resulted in the capture of illegal border crossers in search of work and family and plastic-wrapped bags of smuggled marijuana.

In the private sector and most of government outside the national security apparatus, high-tech fixes like SBInet and the UAV program would likely come under more critical review because of its high cost. But when it comes to the government side of the national security complex, which taps the ever-rising budget authorizations for homeland security, there is no discernible bottom line—and therefore, apparently, no need for cost-benefit assessments.

On January 10, 2010, when announcing the SBInet decision, rather than using the occasion to reassess the entire notion of border security as it has been practiced over the past decade, DHS Secretary Napolitano stressed that the Obama administration was not getting soft on border security

This type of get-tough posture on border security has led to wasteful high-tech fixes and other border-control initiatives that have little to do with American security. Needed are security and border control strate-

gies that are focused on real and potential threats, not unfocused programs that equate security and border protection with a crackdown on immigrants and illegal drugs.

The country certainly needs a 21st century border-control operating plan. Tapping new technologies must be part of such a plan. However, before DHS and CBP proceed with high-tech fixes for border security, they must first better define border security.

By recklessly including all illegal border crossers and such relatively harmless drugs as marijuana as part of the "dangerous people and goods" they are targeting, DHS and CBP are not focused on protecting the homeland and are certainly not increasing the security of Americans. Unfocused border security operations aren't a substitute—or even effective complement—for an immigration and employment policy that works for Americans. Nor should they be viewed, as they now are by DHS and CBP, as an extension of the failed and fatally flawed drug wars at home and abroad.

The Department of Homeland Security and its CBP agents need to take their mission to protect America from "dangerous people and goods" more seriously. As it is, all illegal border crossers and illegal drugs are regarded as dangerous simply because they are outside the law. When DHS measures the success of its border control operations by the numbers of immigrants apprehended and the pounds of marijuana seized, this vast new government department demonstrates how unfocused and adrift from its mission it truly is. As a result, over the past seven years the terms *homeland security* and *border security* have become associated by the public and policy community alike with immigrant and drugs.

The rush to bolster homeland security was understandable and politically popular in the wake of the September 11 attacks. Yet more than eight-years later the federal government and both political parties have been unfocused in their efforts to protect the country against real and potential threats.

With little or no in-house technological expertise and seemingly unlimited funds, DHS has recklessly pursued border-security strategies that aren't tied to threat evaluations. In its pursuit of high-tech solutions, DHS hasn't been bound by the type of financial concerns that burden nonsecurity government agencies and

most of the American people.

With the failure of the ill-considered virtual wall of the SBInet project and as calls mount for UAV patrols and for other instruments of border-control, the Obama administration would do well to reconsider the entire notion of border security before authorizing new projects and new expenditures. With a sharpened homeland-security strategy for the border, DHS would be better positioned to consider how high-tech surveillance

might—or might not—aid in targeting truly dangerous people and goods. But if DHS continues to equate border security and total “operational control” of the land borders, then the fallacies and failures of high-tech projects over the past decade will also continue—at an enormous cost to the U.S. taxpayer.

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ENDNOTES

1. The Border Patrol has alternated the estimated cost of SBInet, saying at first that would cost \$7.6 billion and then reversing the numbers, saying more recently that it would cost \$6.7 to deploy along southwestern border. These numbers were presented to congressional committees and the media without any source material to explain the derivation of the estimate—and without any detailed overall plan. To deploy SBInet along both borders, the DHS inspector general projected that it could cost as much as \$30 billion, noting, however, that cost projections were only guesses since nobody knew what technology would be used.
2. CBP news releases indicate that there are three Predators at Ft. Huachuca/Libby Army Airfield in Sierra Vista, Arizona, a military town southeast of Tucson and close to the border town of Douglas. In addition, CBP has two Predators at Grand Forks Air Force Base in North Dakota.
3. CBP noted that the Hunter drone contributed to the apprehensions of 287 illegal immigrants and the seizure of 1,900 pounds of marijuana.
4. The Air Force recently acknowledges that more than one-third in its UAV fleet has crashed to partially explain its high number of new UAV orders.
5. This is mainly because of the huge amount of nontargeted video that must be processed and reviewed.
6. This price included a remote piloting team and other General Atomics support. But it does not include the costs of making the actual arrests and seizures, which includes the crews of Border Patrol agents, their vehicles, and often manned aircraft.
7. For more information on CBP’s “risk-based” drug seizures, see Tom Barry, CIP Policy Report, *Immigrant Crackdown Joins Failed Wars on Crime and Drugs*. at: <http://americas.irc-online.org/pdf/reports/0904crackdown-CIP.pdf>

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