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Southwest Border Technology Plan White Paper

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Homeland
Security

U.S. Customs and Border Protection

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Executive Summary

The intent of this white paper is to examine and consolidate the history of the Office of Technology Innovation and Acquisition's southwest border security technology plans from the reassessment of *SBI*net (early 2010) through Comprehensive Immigration Reform (CIR) proposals (late 2013). The paper captures the *SBI*net Block 1 Analysis of Alternatives (2010-11), the follow-on Office of Border Patrol Operational Assessments (2010-2011), the resultant sector technology laydown plans, and the associated cost estimates and schedule data that eventually served as OTIA's baseline for all Comprehensive Immigration Reform proposals (2013). In 2012, CBP formed a partnership with DoD to use tens of millions of dollars of equipment leftover from foreign conflicts. As a short term capability, this equipment does not reduce the need for resources to complete CBP projects such as the Arizona Technology Plan. As a historical document, this paper will not be updated based on future funding decisions, and documents the planning baseline of April of 2014



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I. *SBI*net and the Analysis of Alternatives

A. Reassessment of *SBI*net Program

In 2005, the *SBI*net Program was started with the intention of covering the entire Southwest border, and eventually all U.S. borders, with a tightly integrated surveillance system. *SBI*net was originally intended to be DHS's major border security technology effort – tying together systems located along U.S. borders to provide nearly complete detection and awareness of all activity between the U.S. ports of entry. However, (b) (7)(E) cost overruns, and schedule delays from its inception, which raised serious questions about its ability to meet the United States need for border security technology to increase situational awareness along the border.

Soon after becoming Secretary of Homeland Security, Secretary Janet Napolitano asked CBP for an analysis of the *SBI*net program. Based on the findings from this analysis, in January 2010, Secretary Napolitano ordered a Department-wide reassessment of the *SBI*net program that incorporated an independent, quantitative, science-based Analysis of Alternatives (AoA) to determine if *SBI*net was the most efficient, effective, and economical way to meet our Nation's border security needs. At the same time, Secretary Napolitano froze funding for *SBI*net beyond the initial deployments of Block 1 to (b) (7)(E). The assessment focused on two fundamental questions:

- Whether the *SBI*net program was viable—if it could be made to work effectively and fulfill the original intent of the program; and
- If *SBI*net was viable, whether other equally or more effective technologies were available at lower cost.

B. Analysis of Alternatives

In the *SBI*net Block 1 AoA, Homeland Security Studies and Analysis Institute (HSSAI) quantified the effectiveness of various possible technology solutions by identifying the most important elements of effectiveness, and then assigning scores that reflect how well each technology option supports each of these elements. These six scores are called “Measures of Effectiveness” (MOEs):

1. Persistent surveillance: (b) (7)(E)
2. Timely and effective response: (b) (7)(E);
3. Support of other Border Patrol mission elements: (b) (7)(E)

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- 4. Agility: [REDACTED] (b) (7)(E) [REDACTED];
- 5. Strategic intelligence value: [REDACTED] (b) (7)(E) [REDACTED];
- 6. Dynamic surveillance: [REDACTED] (b) (7)(E) [REDACTED].

Because there are several MOEs, each one was weighted, then combined into a single, overall effectiveness score.

In addition, within the AoA, the HSSAI analyzed five types of technology options:

- Alternative 1: Agent-Centric, included small, usually handheld systems that assist individual agents in observing activity;
- Alternative 2: Fixed, focused on fixed sensor towers with (b) (7)(E) [REDACTED] integrated together through a common operating picture (COP)--the class of technology systems most like the existing SBInet Block 1;
- Alternative 3: Mobile, focused on the class of technology systems like the existing (b) (7)(E) [REDACTED] (b) (7)(E) [REDACTED];
- Alternative 4: Aviation-Centric, [REDACTED] (b) (7)(E) [REDACTED];
- Alternative 5: Tethered Aerostats, [REDACTED] (b) (7)(E) [REDACTED].

The cost sub-team of the AoA study team generated rough-order-of magnitude (ROM) cost estimates for each technology alternative. They compared relative ROM costs to the relative overall effectiveness score, the Operational Effectiveness Summary which is the weighted sum of Measures of Effectiveness for each technology alternative. Based on relative strengths, weaknesses, and costs the AoA results provided insight regarding possible combinations of these various alternatives.

The results of the AoA indicated that the appropriateness of technologies for each area of the border depends on the nature of each area. There is not a “one-size-fits-all” solution to border security, which contradicted the idea proposed under the SBInet Program. The Department therefore concluded that the SBInet Program was not a viable solution for border security moving forward. Future SBInet deployments were cancelled as a result, and Secretary Napolitano directed CBP to utilize existing, proven technology solutions that are tailored to the distinct terrain, population density, and threat of each border region.

The Department’s SBInet Block 1 AoA was conducted in several phases:

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- Phase 1A – Arizona (Yuma and Tucson sectors);
- Phase 1B – San Diego, El Paso, Rio Grande Valley sectors; and
- Phase 2 – El Centro, Big Bend (Marfa), Del Rio, Laredo sectors.

The AoA did not prescribe technology deployment plans that corresponded to these phases.

C. Operational Assessment

Operational Subject Matter Experts (SMEs) from the U.S. Border Patrol (USBP), who were familiar with the Southwest border Areas of Responsibility (AoRs), were selected to conduct the Operational Assessment and produce the technology laydowns associated with each Southwest border AoR. In mid 2011, the SMEs took into account the results of the AoA, the operational realities of each AoR (b) (7)(E), the capabilities of different technologies, and the costs associated with these technologies to come up with the appropriate mix of assets to secure each AoR and support each AoA phase. This came to be known as the Southwest Border Technology Plan.

II. Southwest Border Technology Plan

A. Phase 1A – Arizona Technology Plan

Phase 1A was, and continues to be, the priority phase of the Southwest Border Technology Plan for CBP. The resulting technology laydown for the Arizona border is known as the Arizona Technology Plan, which is managed by OTIA and funded through the Border Security Fencing Infrastructure and Technology (BSFIT) appropriation. Secretary Napolitano approved the Arizona Technology Plan in October of 2010 and agreed to extend the AoA planning to the rest of the southwest border.

Table 1 includes the focus areas and technologies that are part of the current, funded Arizona Technology Plan. Focus areas were segregated due to their varying characteristics and differing needs for technology. Focus Area 1 includes (b) (7)(E) Stations and is mostl (b) (7)(E). Focus Area 2 includes (b) (7)(E) Stations and is a mix of (b) (7)(E) (b) (7)(E). Focus Area 3 includes (b) (7)(E) (b) (7)(E) Stations and is (b) (7)(E) (b) (7)(E). Focus Area 4 includes (b) (7)(E) Station and is (b) (7)(E) (b) (7)(E).

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Table 1. Phase 1A – Arizona Technology Plan Focus Areas and Technologies*

Focus Area 1 (Stations: (b) (7)(E) (b) (7)(E))	Focus Area 2 (Stations: (b) (7)(E) (b) (7)(E))	Focus Area 3 (Stations: (b) (7)(E) (b) (7)(E))	Focus Area 4 (Stations: (b) (7)(E))
(b) (7) (E)			
(b) (7) (E)			

B. Phases 1B and 2

The Southwest Border Technology Plan includes technology plans for sectors in Phases 1B and 2 of the AoA. Technology and quantity configurations for each sector are listed in Tables 2 through 8.

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Table 2. Phase 1B – Proposed (b) (7)(E) Border Technology

Border Patrol Technology	Checkpoint Technology	OAM Technology [^]
(b)	(7)	(E)

[^]Field requests for OAM technology. OAM HQs is working on deconflicting the requests with existing technology refresh efforts.

Table 3. Phase 1B – Proposed (b) (7)(E) Border Technology

Border Patrol Technology	Checkpoint Technology	OAM Technology [^]
(b)	(7)(E),	(b) (5)

[^]Field requests for OAM technology. OAM HQs is working on deconflicting the requests with existing technology refresh efforts.

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Table 4. Phase 1B – Proposed (b) (7)(E) Border Technology

Border Patrol Technology	Checkpoint Technology	OAM Technology^
(b) (7)(E), (b) (5)		
<i>(b) (7)(E) includes new and refresh</i>		
<i>^Field requests for OAM technology. OAM HQs is working on deconflicting the requests with existing technology refresh efforts.</i>		

Table 5. Phase 2 – Proposed (b) (7)(E) Border Technology

Border Patrol Technology	Checkpoint Technology	OAM Technology^
(b) (7)(E), (b) (5)		
<i>(b) (7)(E) includes new and refresh</i>		
<i>^Field requests for OAM technology. OAM HQs is working on deconflicting the requests with existing technology refresh efforts.</i>		

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Table 6. Phase 2 – Proposed (b) (7)(E) Border Technology

Border Patrol Technology	Border Patrol Technology (cont.)	Checkpoint Technology	OAM Technology [^]
(b)	(7)(E),	(b)	(5)

(b) (7)(E) includes new and refresh

[^]Field requests for OAM technology. OAM HQs is working on deconflicting the requests with existing technology refresh efforts.

Table 7. Phase 2 – Proposed (b) (7)(E) Border Technology

Border Patrol Technology	Border Patrol Technology (cont.)	Checkpoint Technology	OAM Technology [^]
(b)	(7)(E),	(b)	(5)

(b) (7)(E) includes new and refresh

[^]Field requests for OAM technology. OAM HQs is working on deconflicting the requests with existing technology refresh efforts.

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Table 8. Phase 2 – Proposed (b) (7)(E) Border Technology

Border Patrol Technology	Border Patrol Technology (cont.)	Checkpoint Technology	OAM Technology^
(b) (7)(E), (b) (5)			
<small>(b) (7)(E) includes new and refresh</small>			
<small>^Field requests for OAM technology. OAM HQs is working on deconflicting the requests with existing technology refresh efforts.</small>			

In May 2012, CBP briefed Secretary Napolitano on the approved Arizona Technology Plan (Phase 1) procurement schedule, AoA insights and operational assessment details, and the technologies planned for the remainder of the Southwest border. Plans for phases 1B and 2 were shelved until funding became available. In 2013, the need for securing the remainder of the Southwest Border came to the forefront as a result of Comprehensive Immigration Reform discussions.

III. DoD Re-Use

In addition to working toward current acquisition plans and strategies, such as the Arizona Technology Plan, CBP has formed a partnership with DoD to use “excess” equipment leftover from previous foreign conflicts. CBP identified several categories of equipment that would be beneficial to use, and nearly all categories matched DoD equipment no longer in use. To date, several categories of equipment have been delivered to CBP from DoD. These are included in Table 9. Re-using DoD equipment benefits CBP operationally. The equipment received is valued at \$21.7 million. It is important to note that this equipment does not reduce the need for resources to complete CBP projects such as the Arizona Technology Plan; however, it does aid CBP in its operations. As far as the sustainment of this DoD re-use equipment is concerned, CBP currently intends to operate the equipment until it is no longer operational. At this time, sustainment requirements have not been developed by the CBP components for the DoD reuse

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equipment; however, if sustainment requirements are developed, then CBP will work toward meeting these requirements.

Table 9. DoD Retrograde Equipment: Phase 1 Distribution to CBP, Equipment Types

(b) (7)(E)	(b) (7)(E)
	<ul style="list-style-type: none"> • (b) (7)(E) Communications Equipment • (b) (7)(E) • Convoy Kits • Agricultural Tractors

In addition to the equipment described in Table 9, CBP is in the process of acquiring additional DoD equipment, such as **(b) (7)(E)**. **(b) (7)(E)** Aerostat technology is relocatable and therefore allows CBP to be more flexible in responding to border threats.

In August 2012, CBP worked with DoD to conduct an Operational Utility Demonstration of the excess DoD tethered aerostats for CBP’s use. CBP found that the tethered aerostat systems: enhance OBP’s situational awareness; **(b) (7)(E)**

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

(b) (7)(E) In November 2013, CBP began a tethered aerostat Force Development Event in **(b) (7)(E)** **(b) (7)(E)** in order to develop an aerostat Concept of Operations and determine affordability of aerostat operations **(b) (7)(E)** aerostats will be tested through the third quarter of FY 2014. It is anticipated that DoD will release additional **(b) (7)(E)**

(b) (7)(E) units for CBP operational applications.

IV. Comprehensive Immigration Reform (CIR)

A. CIR Proposals

In January 2013, DHS tasked CBP to provide the House of Representatives with a cost estimate for border security technologies as part of CIR. In response, OTIA provided as its CIR proposal a cost estimate for completing the Southwest Border Technology Plan, broken out by phases, sectors, and fiscal year (see Appendix A). Over the next few months, OMB asked OTIA more specific follow-up questions, including costs for deploying technology to **(b) (7)(E)** only (see Appendix B). The data used for CBP’s CIR-related proposals came directly from cost estimates developed for phases 1B and 2 technology plans (see Appendix C). The result for the full

Southwest Border Technology Plan¹ was a \$3.2 billion investment plus operations and maintenance (O&M).

B. Border Security, Economic Opportunity, and Immigration Modernization Act of 2013

On April 17, 2013, S.744 Border Security, Economic Opportunity, and Immigration Modernization Act of 2013 was introduced to achieve and maintain effective control in high risk border sections along the Southern Border. In June 2013, the bill passed the Senate and called for \$46.3B to be transferred from the Treasury to a Trust Fund to be used as follows:

- \$30.0B for additional USBP agents
- \$4.5B to carry out the Comprehensive Southern Border Security Strategy
- \$2.0B to carry out programs, projects, and activities recommended by the Southern Border Security Commission established in the bill
- \$8.0B for fencing
- \$0.75 for the employment verification system
- \$0.9B for one time and startup costs
- \$0.15 for other initial costs

In addition, the bill called for \$3.0B to be appropriated to the CIR Start-up Account, consisting of any funds in the Treasury not otherwise appropriated to pay for one-time and startup costs, including:

- Equipment, information technology systems, infrastructure, and human resources;
- Outreach to the public, including development and promulgation of any regulations, rules, or other public notice;
- Grants to community and faith-based organizations; and
- Anti-fraud programs

As of 2014, the House of Representatives is pushing for a piecemeal approach to immigration that puts a priority on border security before considering a pathway for those here illegally to earn citizenship. The House strategy runs counter to the comprehensive bill passed by the Senate.

V. Implementation Status of Southwest Border Technology Plan

A. Arizona Implementation and FY 2014 Enacted Rescission

¹ For Southwest Border Technology Plan laydown details at the sector, station, and zone level, see Appendix D.

CBP continues to work toward the completion of Arizona Technology Plan as laid out in Table 1. However, the FY 2014 Consolidated Appropriations Act, P.L. No: 113.76, states that \$67.498 million is rescinded from the BSFIT appropriation. In February 2014, CBP stakeholders decided that the full amount will be taken from prior-year IFT Development and Deployment (D&D) funding. The IFT Program will therefore only have enough funding to deploy to (b) (7)(E) and the (b) (7)(E) – which consists of (b) (7)(E). The Act also states that additional deployments of IFT shall not occur until the Chief of the Border Patrol certifies to the House of Representatives and Senate Appropriations Committees that the first IFT deployment (b) (7)(E) meets the operational requirements of USBP. CBP will follow this requirement. The (b) (7)(E) deployment is scheduled for FY 2015.

B. South Texas Corridor Priority

After Arizona, the south Texas corridor is CBP’s next priority toward implementing the Southwest Border Technology Plan. In February 2014, OMB recognized the need for border security technology in (b) (7)(E) and increased BSFIT’s investment funding by \$90M in FY 2015. This funding will support the acquisition of (b) (7)(E) in (b) (7)(E). It will also support the initiation of deployments of (b) (7)(E). With the deployment of these technologies, USBP will gain greater situational awareness and will have the ability to effectively detect, identify, and track Items of Interest (IoIs) along the Southwest border.

C. Potential Modifications to Plans

OTIA recognizes the need for refinement to these technology plans as threats and priorities change. Operational stakeholders, including the operational users, will continue to refine the operational lay down of the technologies throughout the acquisition process, and will use the outcomes of the analysis to re-assess the cost-effectiveness of the notional technology lay down plan in order to finalize the plan. During this technology “lay down maturation process,” operational stakeholders with the support of OTIA will verify that chosen technologies remain the most appropriate solution.

VI. Appendices

Appendix A: Comprehensive Immigration Reform Proposal

Appendix B: (b) (7)(E) Sector Cost Estimate and Schedule

Appendix C: Life Cycle Cost Estimates for Phases 1B and 2 Technology Plans

Appendix D: Southwest Border Technology Plan Laydown Details to the Station and Zone Level