

Arizona Border Surveillance Technology Plan

(Advised by the SBInet Analysis of Alternatives)

July 22, 2010

Abridged, for CBP Senior Staff July 23, 2010



U.S. Customs and Border Protection



Executive Summary

- **First phase of SBInet Analysis of Alternatives (AoA) focused on Arizona: complete**
- **Border Patrol has augmented AoA with operational assessment of technology needs**
- **Result: baseline plan for technology deployment across Arizona**
- **Go-forward plans will build on results-to-date**
 - **Develop the baseline**
 - **Extend analysis beyond Arizona**

Four Alternatives

Platform and Operator Investment

Alt 3: Mobile

(b) (7)(E)

Alt 4: Aviation-Centric

(b) (7)(E)

Alt 1: Agent-Centric

(b) (7)(E)

Alt 2: Fixed

(b) (7)(E)

Command and Control (C2) Investment

Axes are conceptual only: the positions of the alternatives are not shown to scale.

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General AoA Conclusions

- **There is no “one-size-fits-all” solution**
- **“Best” solution depends on specifics of a given area**
 - **Terrain, geography, population**
 - **Concept of operations and enforcement tactics (e.g., rapid egress)**
 - **Trade between cost and overall capability**
- **Mixing and matching technologies can increase overall cost effectiveness in any given area**



Operational Assessment

Goal

- Identify appropriate mix of technologies to gain situational awareness to manage the Arizona border area

Process

- Convened a panel of operational SMEs from Arizona
- SMEs briefed on the science based AoA methodology and results
- Initially deferred to lower cost technology to meet the situational awareness requirement in each focus area
- Recommendations informed by existing IAA, ORBBP, Arizona surge documents, and the AoA
- Team doubled back to ensure proposed technology laydowns were reasonable based on the AoA

Result

- Proposed technology deployment in Arizona



(b) (5)



Implications for *SBI*net

- **Fixed towers and a Common Operating Picture (COP) have a role in future technology deployments**
- **Comprehensive technology integration may someday be useful—but best left to the future.**
- **However, the original concept for *SBI*net of a single, wholly integrated “virtual fence” may not be appropriate**
 - **Not the right answer for all border areas**
 - **Not the system to integrate all other technologies**
 - **Not cost-effective**



Recommendations

- **Adopt Arizona proposed technology deployment as the basis for near-term decisions**
- **Continue deployment and testing of integrated fixed towers in TUS-1 and AJO-1**
- **Communicate (explicitly acknowledge) changes to the *SBlnet* program**
- **Apply AoA methodology along the rest of the border**
- **Optimize technology deployment based on operator judgments, the AoA, results of the fixed tower testing, and budget decisions**

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SBI^{net} Analysis of Alternatives (AoA)

- **Part of broader, Secretarial-directed assessment of SBI^{net}**
- **Provides a “quantitative, science-based” assessment of types of technology approaches**
- **Enables rigorous comparisons of technologies and analysis of operational judgments**
- **Considers both effectiveness and cost**
- **Does not dictate a solution, but can provide a test of reasonableness or an input to broader analysis**
- **First Phase focused on Arizona—completed**
 - **Reviewed in detail with many DHS offices**



AoA Alternatives

- **Basic requirement: Awareness of border activity through surveillance and detection to facilitate apprehension**
- **Four basic technology approaches**
 - **Agent-centric**
 - **Mobile, decentralized systems**
 - **Fixed systems with centralized control centers**
 - **Aviation centric**

Four Alternatives

Platform and Operator Investment

▪ Alt 3: Mobile

(b) (7)(E)

▪ Alt 4: Aviation-Centric

(b) (7)(E)

▪ Alt 1: Agent-Centric

(b) (7)(E)

▪ Alt 2: Fixed

(b) (7)(E)

Command and Control (C2) Investment

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Note on UAS

- AoA evaluated whether UAS could *also* substitute for fixed, ground-based systems

(b) (7) (E)



General AoA Conclusions

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(b) (5)



Example: (b) (7)(E) within Focus Area 1

- (b) (7)(E)

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

- AoA result:

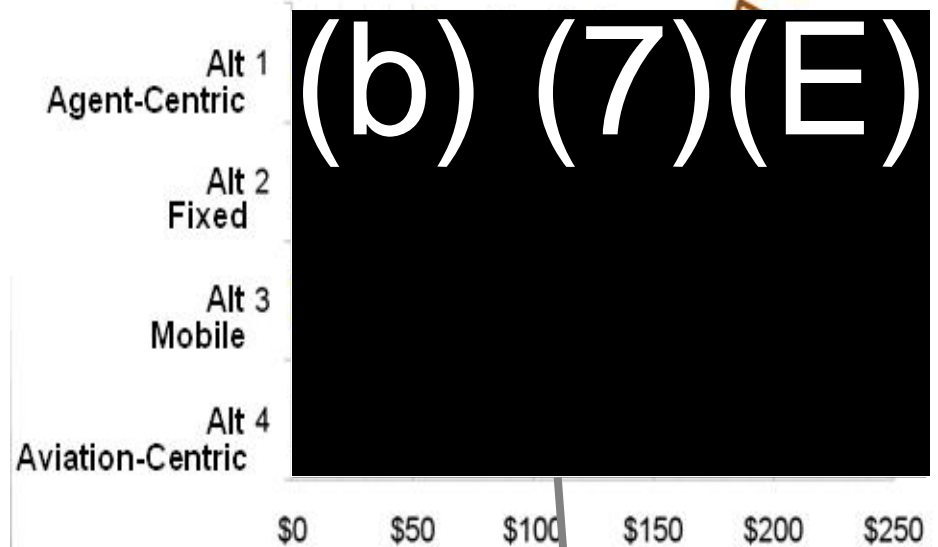
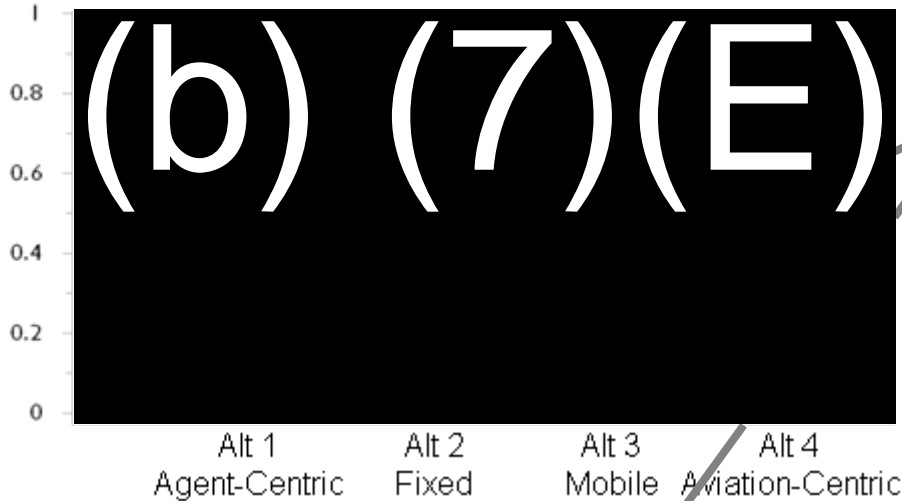
- (b) (7)(E)

- Operational assessment:

- (b) (7)(E)



(b) (7)(E): AoA Summary



...at higher cost. Operational assessment determines whether value is worth the cost



Focus Area 1

(b) (7)(E)

(b) (7)(E)

- Focus Area Characteristics

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

- Additional Technology Requirements (ROM* initial investment)

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

- Air Support

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



Cost Estimates

- Focus Area 1

- (b) (5)
 - (b) (5)

- Focus Area 2

- (b) (5)
 - (b) (5)

- Focus Area 3

- (b) (5)
 - (b) (5)

- Yuma Sector

- (b) (5)
 - (b) (5)

- Cost Assumptions

- Rough-Order-of-Magnitude (ROM) costs for technology investment and Operations and Maintenance (O&M)
 - Costs do not include air support
 - Costs do not include an embedded operational support cost for shared IT software and equipment of (b) (5)



Implications for SBI*net*

(b) (5)



Go-Forward Plan

(b) (5)

Implications for Boeing Contract



(b) (5)



Key Schedule Events

- Complete AoA (b) (7)(E) (Arizona)

Done

(b) (5)

* Not including (b) (7)(E) due to environmental issues

** Dependent on GAO resolution of contractor protest



Recommendations

(b) (5)



Backup



Background

- **CBP currently deploys a variety of technologies along the Southwest Border**
- ***SBI*net was planned to become the major, all-encompassing technology solution for the border**
- **The wisdom of this original *SBI*net concept is questionable**
- **Urgency of border security issues requires a timely and rational plan for technology deployment—now—to maintain persistent monitoring and surveillance**



(b) (7) (E)



The Contribution of Technology

- **Provides information about activity**
 - Monitoring and surveillance
- **Enhances ability to respond**
 - Information about nature of incursions
 - Agent safety
 - Options (how, when, where)
- **Contributes as one of three elements**
 - Personnel, tactical infrastructure, technology
- **Supports efforts both to gain and maintain border security**



Technology for Arizona

- **Compared technology alternatives against operational needs in Arizona**
 - **Advised, but not dictated, by *SBI*net Analysis of Alternatives (AoA) Phase 1A**
- **Developed comprehensive technology proposal with emphasis on focus areas**
- **“Doubled back” to ensure proposal was reasonable based on AoA**



Focus Area 2

(b) (7)(E)

- Focus Area Characteristics

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

(b) (7)(E)

- Additional Technology Requirements

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

- Air Support

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



Focus Area 3

(b) (7)(E)

- Focus Area Characteristics

- (b) (7)(E)

(b) (7)(E)

- Additional Technology Requirements

- (b) (7)(E)

- Air Support

- (b) (7)(E)



(b) (7)(E) **Station**

(b) (7)(E)

- **Focus Area Characteristics**

(b) (7)(E)

(b) (7)(E)

- **Additional Technology Requirements**

(b) (7)(E)

- **Air Support**

(b) (7)(E)



AoA Results Depend on Area

Evaluation: MOE 2.0

Results for All Analysis Areas A-D

(b) (7) (E)

MOE 2.0: Enable Timely and Effective Response



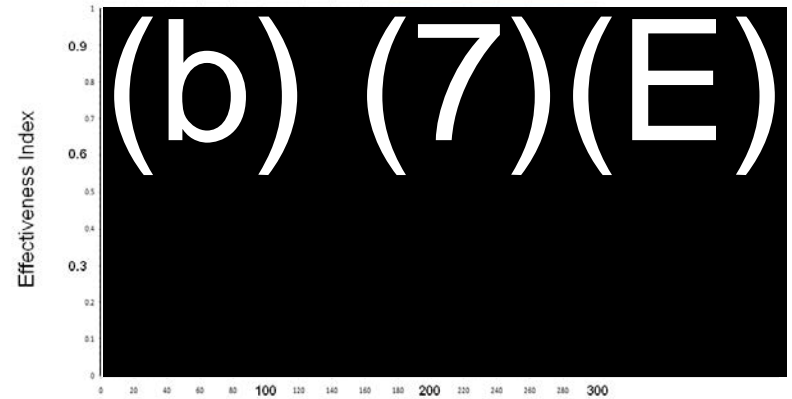
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Cost-Effectiveness Comparison

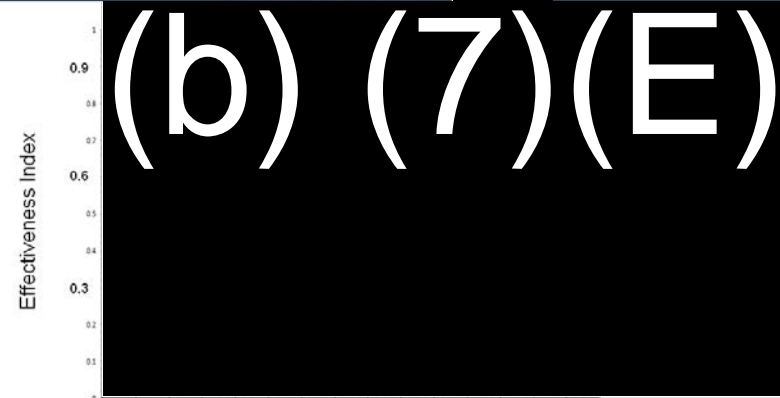
Analysis Area A - (b) (7)(E)



(b) (7)(E) Life-Cycle Cost, Then-Year \$M

Cost-Effectiveness Comparison

Analysis Area D - (b) (7)(E)



(b) (7)(E) Life-Cycle Cost, Then-Year \$M



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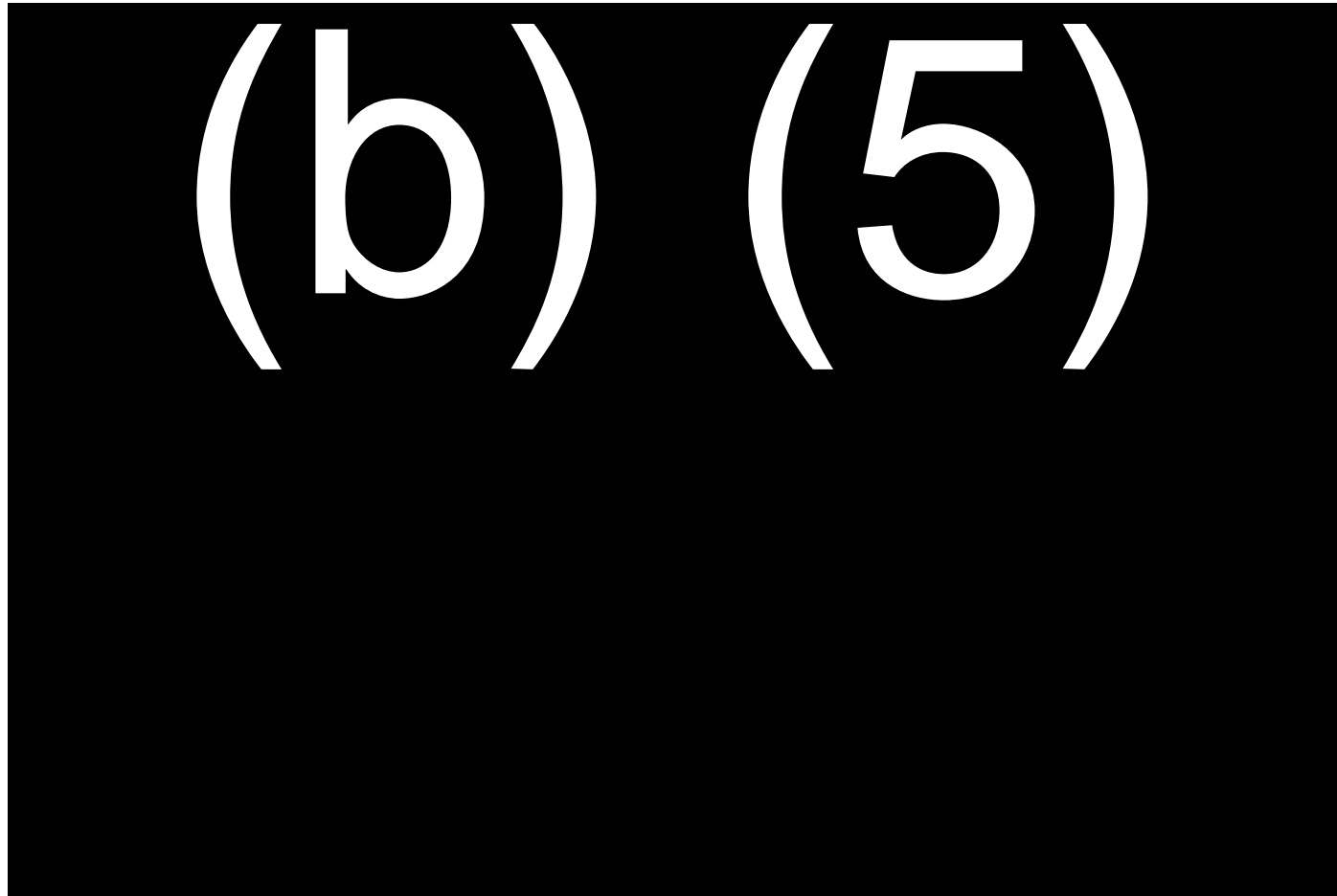
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SBI^{net} Near-Term Schedule

Jul Aug Sep Oct Nov Dec Jan Feb Mar



(b) (7)(E) Acceptance Testing

(b) (7)(E) Operational Testing

(b) (7)(E) Construction*

(b) (7)(E) Acceptance Testing

AoA

Acquisition Decision Event-3

* Not including (b) (7)(E) —environmental issues

AoA Schedule and Status

May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
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(b) (5)

- Focus on
- Near-term technologies
 - Arizona border
 - SBInet program decisions

(b) (7)(E)

