Surveillance and Broadcast Services

Alaska Industry Council

By: Jere Hayslett, SBS Western Service Area Project Manager

Date: September 12, 2007

Federal Aviation Administration

AGENDA

- Opening Remarks – Jere Hayslett
- JRC/Contract Award Update – Jere Hayslett
- Chelton Alternatives – Jere Hayslett, August Asay
- MOA/AIC Update – Joe Pearson
- Operations Update – Jim Hill
- Technical Update – Walter Combs
- Round Table

Program Status: ADS-B Investment Decisions

- **June 7, 2006 final investment decision (Segment 1):**
  - Baseline key site deployment
  - Return for Final Investment Decision for Balance of Program prior to Contract Award (August 2007 Timeframe)
  - ATO Chief Operating Officer (COO) and Associate Administrator for Aviation Safety (AVS) Designation for Co-ISD Authority
- **February 21, 2007 final investment decision (Segment 2):**
  - Baseline NAS-wide deployment
  - Return for Program Re-baseline of Segments 1 and 2 prior to Contract Award (August 2007 Timeframe)
- **August 27, 2007 final investment decision (Segment 1 and Segment 2)**
  - Baseline FY2009 – FY2014

Performance Gaps

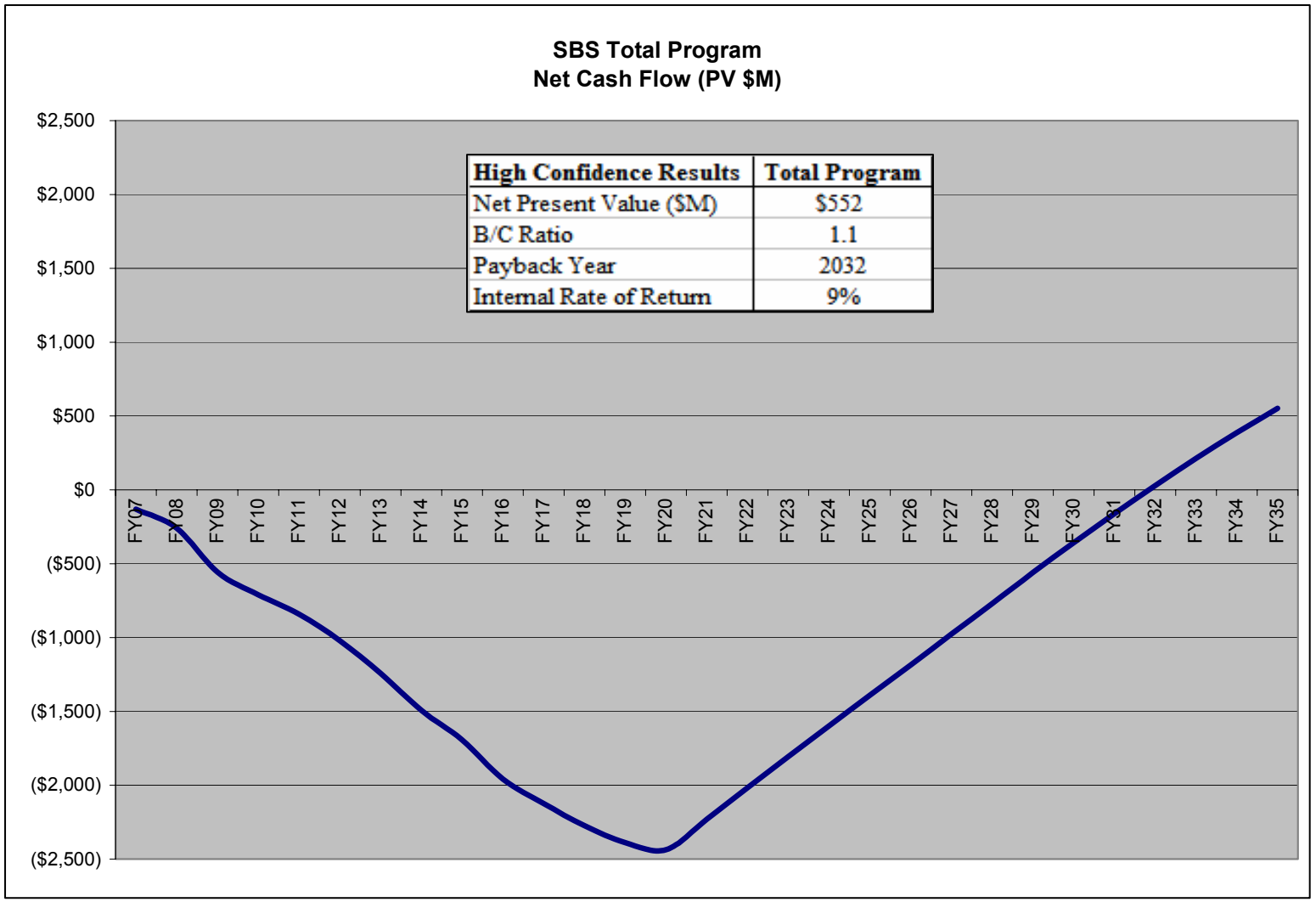
Service Area	Shortfall	Impact
Surface	Inability to precisely predict demand and capacity values, accommodate user preferred trajectories, system inflexibility (MNS #307)	Arrival rates; Taxi times; Departure delays; Fleet management; Surface accidents
	Limited pilot, controller, and vehicular shared situational awareness (MNS #323)	
Terminal	Lack of shared situational awareness and limited aircraft information (MNS #326)	Arrival delays
	Inability to provide surveillance coverage at reduced cost (MNS #326)	FAA life cycle costs; Terminal airspace congestion; User and Service Provider workloads
	Decreasing flight efficiency due to domestic routes	
	Unusable airspace caused by increased terminal congestion (MNS #172)	
En Route / Oceanic	Lack of surveillance coverage within specific regions of the NAS, lack of shared situational awareness, and limited aircraft information (MNS #326)	Delays due to constraints; Reduce probability of mid-air collisions; Search & rescue
	Lack of communication coverage, limited ATC options for severe weather avoidance, sustained traffic growth and a unique and compressed demand (NPI #0094)	Inefficiencies due to constraints; Reduce probability of mid-air collisions; Weather-related accidents; User and Service Provider workloads
	Decreasing flight efficiency due to oceanic track restrictions and domestic routes (MNS #172)	
Broadcast Services	Inability to readily access in-flight weather data, congested voice channels (MNS #42)	Weather-related accidents; NOTAM related accidents; Reduce probability of mid-air collisions; Weather deviations
	Limited pilot situational awareness (MNS #326)	

Support of Agency Goals / SMP Objectives

- **Support of Agency Goals**
  - Reduce Commercial Airline Fatal Accident Rate
  - Reduce the Number of Fatal General Aviation Accidents
  - Increase Capacity to meet demand
  - Reduce the Risk of Runway Incursion
  - Increase On-Time Performance of Scheduled carriers

- **SMP Objectives**
  - Achieve operational excellence
    - **1.3 Ensure safety and aircraft separation**
  - Increase capacity where needed
    - **3.3 Increase Capacity**
  - Ensure viable future
    - **4.3 Deliver the NextGen / OEP commitments**

Business Case Results

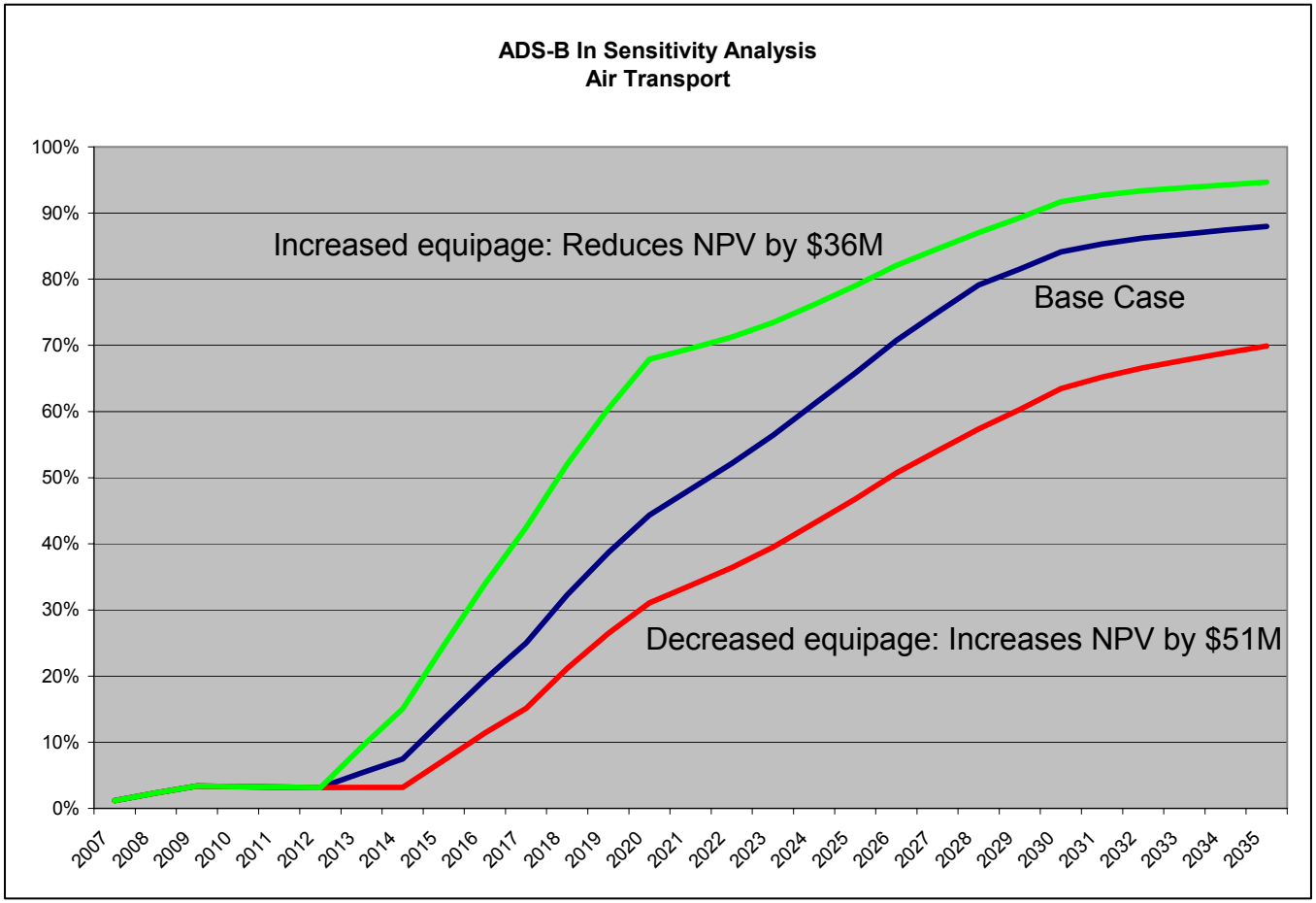


High Confidence Results	Total Program
Net Present Value ($M)	$552
B/C Ratio	1.1
Payback Year	2032
Internal Rate of Return	9%

Benefits Summary

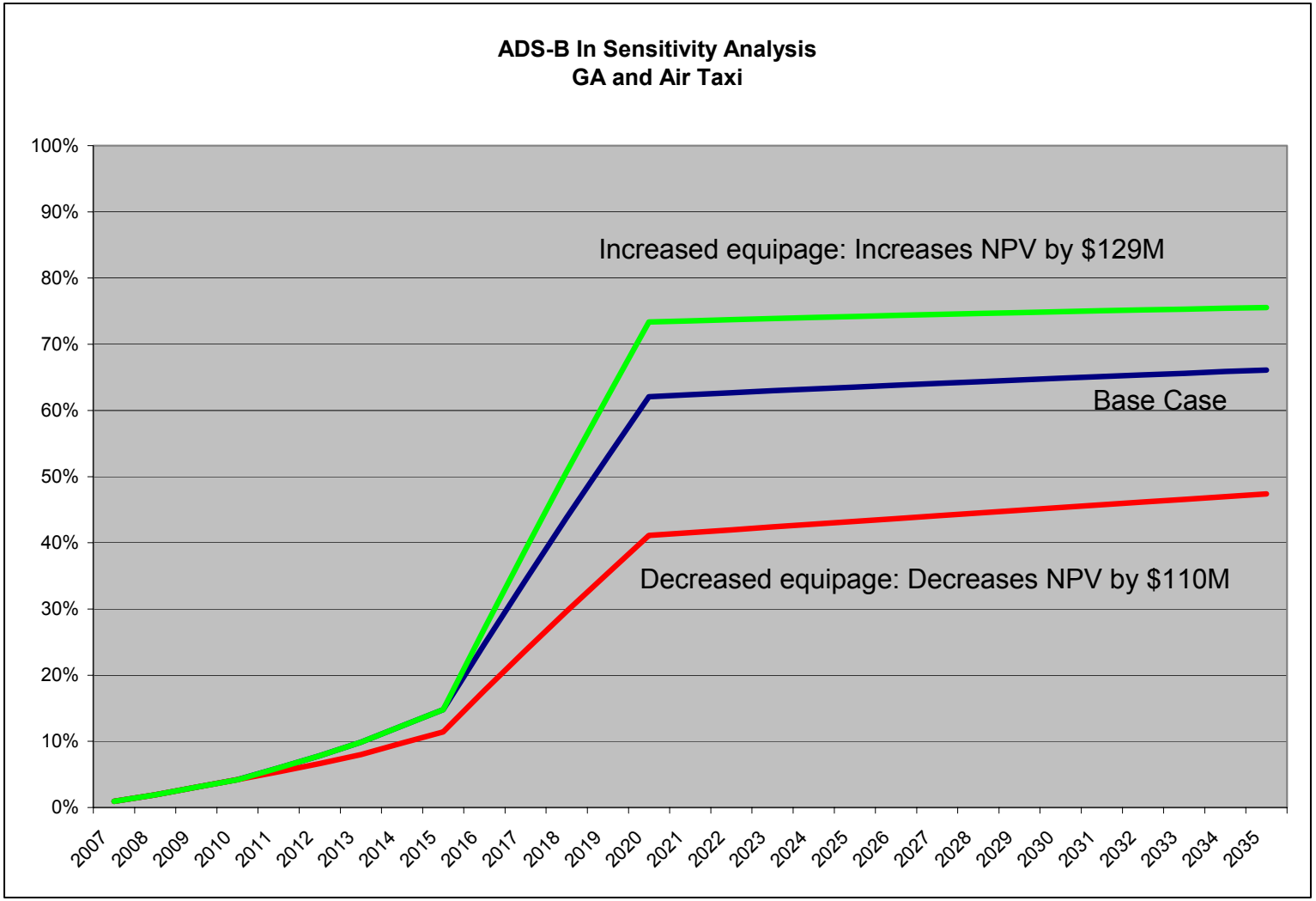
Location	Application	Outcome	Risk-Adjusted PV $M
CONUS, Hawaii, and Caribbean Surveillance	Radar Airspace ATC Surveillance	Surveillance cost avoidance	$371.1
		Reduction and more efficient maneuvers in response to URET	$801.8
		More efficient metering based on improved TMA accuracy	$417.0
		Increased safety on the surface by controllers	$3.2
		More efficient ATC management of surface movement	$26.9
		Reduction in FAA subscription charges due to value added services	$80.6
CONUS, Hawaii, and Caribbean Broadcast Services	Enhanced Visual Acquisition and Conflict Detection	Fewer aircraft-to-aircraft conflicts	$203.6
	Weather and NAS Status Situational Awareness	Fewer encounters with hazardous weather	$232.5
		More efficient routes in adverse weather	$4.9
		Reduction in user costs to obtain weather info	$26.1
		Fewer aircraft-to-terrain conflicts	$284.3
CONUS, Hawaii, and Caribbean Aircraft Applications	Enhanced Visual Approach - Initial Application	More efficient spacing on approach in VMC	$300.4
	Enhanced Visual Approach - CAVS	Continuation of Visual Approaches in marginal conditions	$196.4
	Enhanced Visual Approach - Merging and Spacing ADS-B ATC Automation Integration	Increased ability to perform continuous descent approaches	$796.0
	Airport Surface Situational Awareness Final Approach and Runway Occupancy Awareness	Increased safety on the surface by pilots	$70.5
Gulf of Mexico Surveillance	Non-Radar Airspace ATC Surveillance (includes weather and comm as needed)	High Altitude - Increased Capacity	$459.3
		High Altitude - Optimal Routing	$86.5
		Low Altitude - Increased Capacity	$84.2
		Low Altitude - Reduction in Weather Related Accidents	$5.0
Alaska Surveillance and Broadcast Services	Weather and NAS Status Situational Awareness Enhanced Visual Acquisition and Conflict Detection	Fewer aviation accidents in Alaska	$300.1
	Non-Radar Airspace ATC Surveillance	Access to lower altitude routes in Alaska	$19.5
		Increased IFR capacity (JNU)	$1.1
		Fewer aircraft-to-aircraft conflicts (JNU)	$0.0
		Improved search and rescue services in Alaska	$7.0
Alaska Airport IFR Upgrade Services	Weather Automation upgrade and IFR Approach Development	Increased access to remote villages in Alaska	$90.0
		Increased Medevac access to remote villages in Alaska	$175.4
		Total	**$5,043.2**

ADS-B In Sensitivity Analysis



Sensitivity analysis based on altering equipage assumptions for high priced retrofits for ADS-B In resulting in smaller change in benefits than in costs

ADS-B In Sensitivity Analysis



FAA Cost Summary

			Baselined							
Estimated Cost	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	Total Baselined (FY07 - FY14)	Total Baselined (FY09 - FY14)
Segment 1 and 2 F&E Program Plan	$90.0	$100.0	$308.4	$198.2	$175.2	$284.2	$270.7	$254.7	$1,681.5	$1,491.4
Capstone CIP	$10.0	$15.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$25.0	$0.0
SBS CIP	$80.0	$85.0	$118.2	$217.5	$198.8	$197.0	$126.6	$49.8	$1,072.9	$907.9
Total CIP	$90.0	$100.0	$118.2	$217.5	$198.8	$197.0	$126.6	$49.8	$1,097.9	$907.9
Delta: CIP less F&E Program Plan (3)	$0.0	$0.0	-$190.2	$19.3	$23.6	-$87.2	-$144.1	-$204.9	-$583.6	-$583.6

Alaska Budget FY 07 - 12

Costs in Thousands	FY07	FY08	FY09	FY10	FY11	FY12
Alaska Weather/Airport Costs	$1,955.2	$9,910.0	$22,762.4	$2,395.2	$2,351.4	$6,247.8
Alaska GBT Costs (FAA)	$4,543.1	$7,284.7	$9,391.2	$0.0	$0.0	$0.0
Alaska GBT Costs (ITT)	$0.0	$0.0	$0.0	$20,888.1	$9,902.7	$10,164.8
Jeneau WAM	$3,497.2	$4,731.7	$1,556.1	$2,320.3	$677.7	$672.1
Total	**$9,995.5**	**$21,926.4**	**$33,709.7**	**$25,603.6**	**$12,931.8**	**$17,084.7**

FY07 Figures reflect actual obligations.

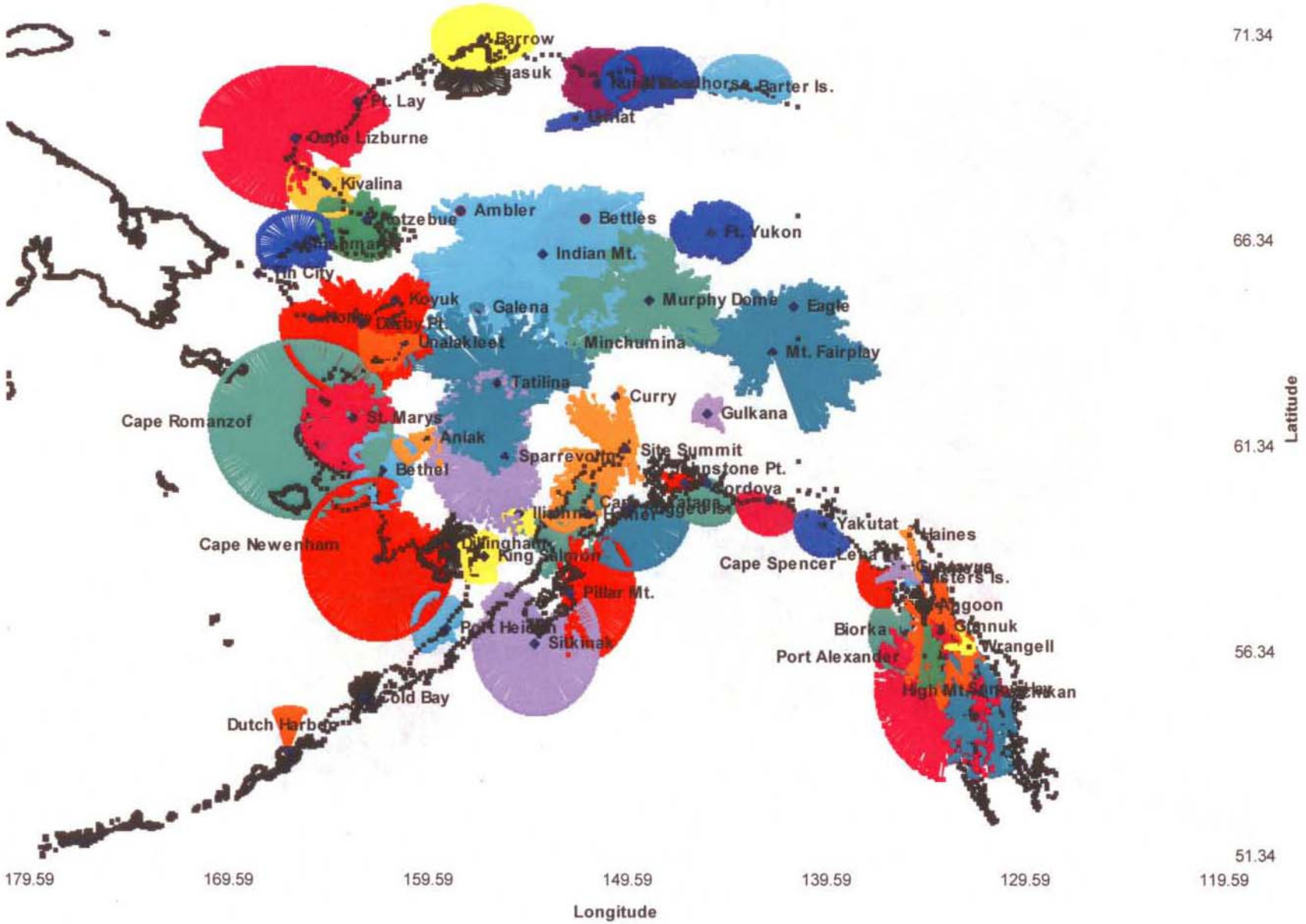
Total investment for FY07-12 = $121,251.7M

Life Cycle support funding will be provided to Alaska for FY13-25

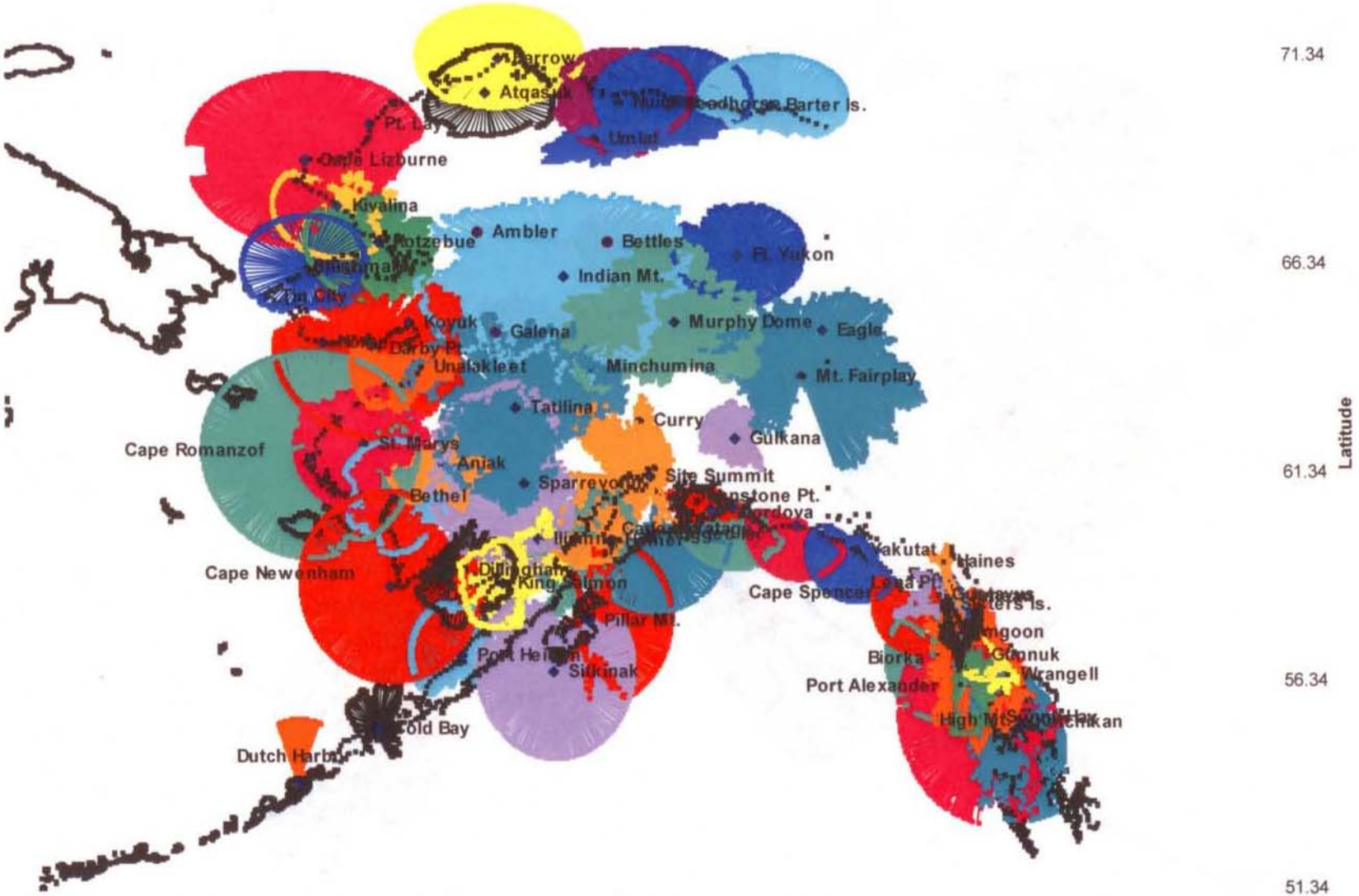
Alaska Business Case Results

Service Volume	FAA Costs	Avionics Costs	Total Costs	GBT-Related Benefits	Avionics Benefits	Total Benefits	Point Estimate NPV $M	B/C	Comments
	PV $M	PV $M	PV $M	PV $M	PV $M	PV $M			
1	$41.48	$4.41	$45.89	$16.36	$36.62	$52.98	$7.09	1.2	Phase II (14 groundstations)
2	$2.07	$0.52	$2.59	$0.88	$1.98	$2.86	$0.27	1.1	1 groundstation
3	$4.91	$1.04	$5.95	$2.16	$4.84	$7.01	$1.05	1.2	2 groundstations
4	$7.37	$1.50	$8.87	$3.02	$6.75	$9.77	$0.90	1.1	3 groundstations
5	$2.46	$0.49	$2.95	$0.98	$2.19	$3.17	$0.22	1.1	1 groundstation
6	$7.37	$12.19	$19.56	$23.66	$52.97	$76.63	$57.07	3.9	ANC to FAI (3 groundstations)
7	$4.14	$1.22	$5.36	$1.88	$4.21	$6.10	$0.74	1.1	2 groundstations
8	$2.26	$0.39	$2.65	$1.08	$2.42	$3.50	$0.85	1.3	1 groundstation
9	$5.03	$1.75	$6.79	$2.93	$6.57	$9.50	$2.71	1.4	2 groundstations (1 in Phase I)
10	$26.67	$12.61	$39.28	$33.48	$74.94	$108.42	$69.14	2.8	Phase I (9 groundstations)
11	$9.83	$3.05	$12.87	$5.96	$13.34	$19.30	$6.43	1.5	4 groundstations
12	$6.77	$1.59	$8.35	$3.38	$7.57	$10.95	$2.59	1.3	3 groundstations
13	$9.83	$2.46	$12.28	$4.81	$10.76	$15.57	$3.28	1.3	4 groundstations
14	$9.02	$1.96	$10.98	$3.41	$7.64	$11.05	$0.07	1.0	4 groundstations
Total	$139.19	$45.17	$184.36	$103.99	$232.79	$336.79	$152.43	1.8	

Select Proposed and Phase 1 & 2 Sites 1000 ft. AGL Predicted Coverage



Select Proposed and Phase 1 & 2 Sites 3000 ft. AGL Predicted Coverage



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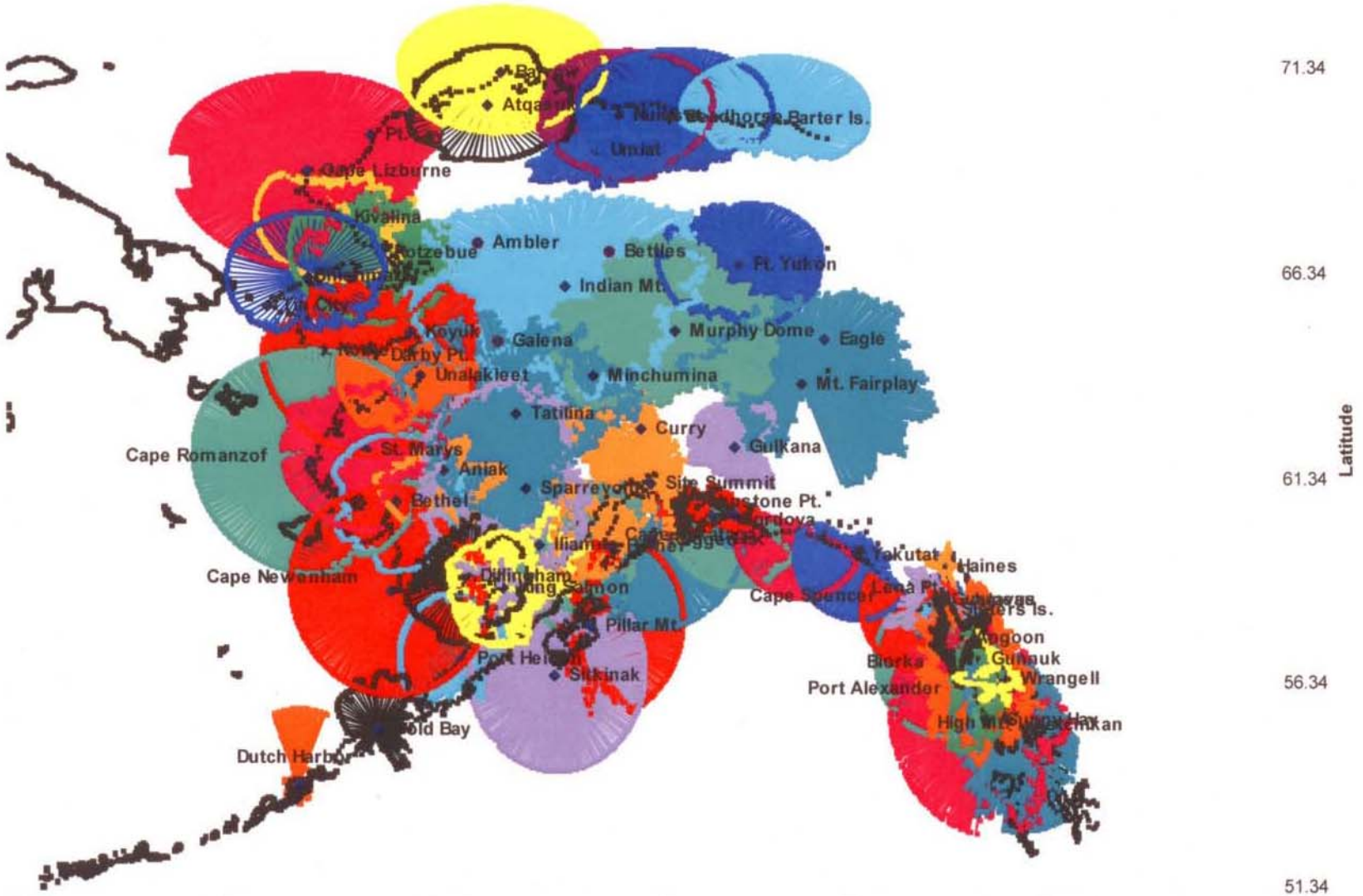

Alaska Business Case Results

Category	Name	ID	Benefit (PV $M)	Cost (PV $M)	B/C Ratio	Point Estimate NPV ($M)
AWS existing (Capstone Phase I & II)	20 sites		$169.16	$17.96	9.4	$151.20
AWS existing (Assume O&M)	King Cove	KVC	$11.07	$0.90	12.3	$10.17
AWS existing (Assume O&M)	Kaktovik	BTI	$7.50	$0.90	8.4	$6.60
AWS existing (Assume O&M)	Galena	GAL	$2.54	$0.90	2.8	$1.64
AWS existing (Assume O&M)	Akhiok	AKK	$1.47	$0.90	1.6	$0.58
AWS existing (Assume O&M)	Nelson Lagoon	NLG	$1.02	$0.90	1.1	$0.12
AWS existing (Assume O&M)	Eagle	EAA	$0.54	$0.90	0.6	($0.36)
AWS existing (Assume O&M)	Point Lay	PIZ	$0.40	$0.90	0.4	($0.49)
AWS existing (Assume O&M)	Atqasuk	ATK	$0.29	$0.90	0.3	($0.61)
Needs new AWS	Robert/Bob/Curtis	D76	$10.84	$1.80	6.0	$9.04
Needs new AWS	Kasigluk	Z09	$8.73	$0.88	9.9	$7.85
Needs new AWS	Shaktoolik	2C7	$8.59	$1.80	4.8	$6.78
Needs new AWS	Quinhagak	AQH	$5.71	$0.88	6.5	$4.82
Needs new AWS	Clarks Point	CLP	$5.33	$0.96	5.6	$4.38
Needs new AWS	Napakiak	WNA	$4.39	$0.88	5.0	$3.51
Needs new AWS	Tok Junction	6K8	$3.72	$0.88	4.2	$2.84
Needs new AWS	Kwethluk	KWT	$2.98	$0.88	3.4	$2.10
Needs new AWS	Allakaket	6A8	$2.63	$0.96	2.7	$1.67
Needs new AWS	Koyukok	KYU	$2.28	$0.96	2.4	$1.32
Needs new AWS	Shageluk	SHX	$1.65	$0.88	1.9	$0.77
Needs new AWS	Elim	ELI	$2.31	$1.80	1.3	$0.50
Needs new AWS	Central	CEM	$1.45	$0.96	1.5	$0.49
Needs new AWS	South Naknek NR	WSN	$1.14	$0.96	1.2	$0.19
Needs new AWS	Hughes	HUS	$1.11	$0.96	1.2	$0.15
Needs new AWS	Kwigillingok	A85	$0.75	$0.88	0.8	($0.13)
Needs new AWS	Circle City/New	CRC	$0.82	$0.96	0.9	($0.14)
Needs new AWS	Willow	UUO	$1.62	$1.80	0.9	($0.18)
Needs new AWS	Beaver	WBQ	$0.64	$0.96	0.7	($0.32)
Needs new AWS	Tatitlek	7KA	$0.48	$0.88	0.5	($0.40)
Needs new AWS	Chauthbaluk	9A3	$0.22	$0.88	0.2	($0.67)
Needs new AWS	Chalkyitsik	CIK	$0.28	$0.96	0.3	($0.67)
Needs new AWS	Healy River	HRR	$0.73	$1.80	0.4	($1.07)
Needs new AWS and RCO	White Mountain	WMO	$7.68	$3.54	2.2	$4.14
Needs new AWS and RCO	Larsen Bay	2A3	$6.56	$2.69	2.4	$3.87
Needs new AWS and RCO	Brevig Mission	KTS	$3.90	$3.54	1.1	$0.36

Segment 1 Schedule

Milestone	Projected Completion Date	Key site SAT Successful Completion
Contract Award	August 2007	
NPRM Issued	September 2007	
Integrated Baseline Review	October 2007	
IBR Critical Action Items Completed	November 2007	
Preliminary Design Review (PDR)	November 2007	
Critical Design Review (CDR)	February 2008	
Key Site Initial Operating Capability (IOC) of Broadcast Services	August 2008	May 2008
In-Service Decision (ISD) of Broadcast Services	November 2008	
Terminal Separation Standards Approval at Louisville	June 2009	
En Route Separation Standards Approval for Gulf of Mexico	July 2009	
Terminal Separation Standards Approval at Philadelphia	September 2009	
En Route Separation Standards Approval at Juneau	September 2009	
Gulf of Mexico Comm. and Weather IOC	September 2009	March 2009
Louisville IOC of Surveillance and Broadcast Services	October 2009	April 2009
Final Rule Published	November 2009	
Gulf of Mexico IOC of Surveillance and Broadcast Services	December 2009	June 2009
Philadelphia IOC of Surveillance and Broadcast Services	February 2010	August 2009
Juneau IOC of Surveillance and Broadcast Services	April 2010	October 2009
Surveillance and Broadcast Services ISD for ADS-B	September 2010	

For essential services, SAT occurs 3 months prior to IOC. For critical services, SAT occurs 6 months prior to IOC Key site SATs are considered default milestones.

Business Case Review: Proposed Schedule - Segment 2

Milestone	Projected Dates
Segment 2 (2009 – 2014)	
Implementation:	
Continue Initial Aircraft to Aircraft Application Deployment	FY 2010 – FY 2014
Additional Aircraft to Aircraft Application Deployment	FY 2010 – FY 2014
Additional Aircraft to Aircraft Requirements Definition	FY 2010 – FY 2014
Continue / Complete TIS-B / FIS-B Deployment	FY 2009 – FY 2012
Continue / Complete ADS-B NAS Wide Infrastructure Deployment	FY 2010 – FY 2013
Complete 26% Avionics	FY 2014
Lifecycle:	
Targeted Removal of Legacy Surveillance	FY 2016 – FY 2020
Complete 100% Avionics	FY 2020
Complete Removal of Targeted Legacy Surveillance	FY 2023
Complete Targeted Removal of TIS-B	FY 2025

Note: Segments 3 and 4 will focus on the continued definition / deployment of additional aircraft to aircraft applications

Acquisition Status: Schedule

Task:	Date / Status:
Release of Request for Offer (RFO)	March 30, 2007 / Complete
Business and Technical Responses Due	June 4, 2007 / Complete
Cost Proposals Due	June 20, 2007 / Complete
RFO Evaluation Complete (Business, Technical and Cost)	July 5, 2007 / Complete
RFO Final Report Completion	July 20, 2007 / Complete
Final Report Approval	July 27, 2007 / Complete
CIT Review	August 16, 2007/ Complete
Executive Council Briefing	August 21, 2007/Complete
Joint Resource Council (JRC)	August 27, 2007/Complete
Contract Award	August 30, 2007/Complete

Rulemaking Status

Task:	Date / Status:
Preliminary Team Concurrence of NPRM	December 2006 / Complete
Economic Evaluation of NPRM	February 2007 / Complete
Final Team Concurrence (through Director level) of NPRM	May 2007 / Complete
Associate Level Concurrence of NPRM	May 2007 / Complete
ADA/AOA Approval of NPRM	May 2007 / Complete
OST Approval of NPRM (given standard 30 days as indicated in the rulemaking manual)	July 2007 / Complete
OMB Approval of NPRM (given standard 90 days as directed by Executive Order)	9/28/2007
Issuance	No later than September 2007

Contract Award Announcement

- On August 30, 2007 the FAA awarded the ADS-B national contract to ITT, Corp as the prime contractor
- ITT has a team of sub contractors which includes AT&T, Thales, WSI, SAIC, PriceWaterhouseCoopers, Aerospace Engineering, Sunhillo, Comsearch, MCS of Tampa, Pragmatics, Washington Consulting Group, Aviation Communications and Surveillance Systems (ACSS) and NCR Corporation
- In addition, ITT has partnered with L-3 Avionics Systems and Sandia Aerospace

Contract Value

- **Initial Award of approximately $207M**
  - Segment 1 Critical and Essential Broadcast Services Development and Installation
- **Potential Options of approximately $1.6B**
  - Segment 1 Critical and Essential Broadcast Services subscription charges
  - Segment 2 Critical and Essential Broadcast Services subscription charges
  - Generic Surface, Terminal and EnRoute service volumes
  - Program Management
  - Engineering Services
  - Weather Activations
  - Delivery of data to FAA Command Center
  - Provision of service to other service delivery points
- **Total Contract Value of approximately $1.86B**

Program Management: Acquisition Strategy

- **Performance Based Service Contract for ADS-B, TIS-B, and FIS-B**
  - The ADS-B acquisition has been structured as a multi-year, performance-based service contract under which the vendors will install, own, and maintain the equipment; and the FAA will purchase services in the same way the agency purchases telecommunications services today.
  - The FAA will define the services it requires and maintain ultimate control of the data that flows between the vendor's infrastructure, FAA facilities, and aircraft. The government will not own the ground infrastructure (which will be owned by the vendor) or the avionics (which will be owned by the aircraft owner).

FAA Oversight: Monitoring of Vendor Performance

- **Data will be certified by the FAA**

- **A Performance Control Board will be established which consists of FAA and Vendor personnel. The functions of this board will be to:**
  - Monitor and maintain configuration management of the system
  - Compare contractor performance against metrics and incentives
  - Assess overall quality of the services provided
  - Review and agree on, from a safety and security standpoint, any changes to be incorporated into the system
  - Review and agree upon proposed value added services
  - Mutually resolve any disagreements regarding responsibilities of the parties
  - Resolve programmatic issues
  - Monitor the effectiveness of metrics and adjust accordingly

Next Steps Alaska

- Continue FAA implementation FY08-FY09
- Modify National Contract to reflect Alaska requirements
- Develop transition strategy with National ADS-B vendor – Ongoing
- Continue to develop schedule for AIC Implementation Plan
- Develop avionics transition plan for SE Aircraft Owners by December 2007
- ADS-B team will return to JRC prior to production decision in the 2009 time frame

Southeast Alaska Avionics Alternatives Analysis

ATO-E Surveillance and Broadcast Services

Results Briefing

Alaska Industry Council

ATO-E SBS Program Management

September 10, 2007

Federal Aviation Administration

Chelton Alternatives

Background

- **FAA funded equipage of 180 aircraft in southeast Alaska as part of the Capstone initiative (Garmin GDL-90 UAT/ Avionics Suite)**
  - 67 equipped with Garmin displays
  - 91 equipped with Chelton displays
  - 22 are out of service IAW Memorandum of Agreement (MOA) between FAA and users, the users have option of removing ADS-B Suite (Avionics and UAT) after December 2008 or purchase ADS-B Suite at a depreciated cost.
- **FAA must develop an Avionics Transition Plan by December 2007 to:**
  - Have the installed avionics operational by March 2008 to accommodate the 2008 flying season (March-September), or
  - Remove installed avionics by December 2008 if users choose not to purchase

Objectives

- **Conduct an alternatives analysis to develop a low-risk, cost-effective recommendation by September 2007 to enable 91 aircraft equipped with the Chelton display to receive and display ADS-B In**
  - Construct December 2007 Avionics Transition Plan based upon this recommendation
  - Implement solution by March 2008

Participating Organizations

Organization	Responsibilities
ATO-E SBS Program Management ***- Matt Sanders, Chnar Ayala, Diana Castaldo, Arthur Sullivan***	**Facilitate evaluation**
ATO-E SBS Western Service Area ***- Jere Hayslett, Jim Hill, Jim Wright, Paul Fiduccia*** **AIR** ***- August Asay*** **AAL-52 Contract Officer** ***- Karla Shaw***	**Provide information for technical analysis; assist in defining requirements for evaluation criteria**
ATO-E SBS Program Director ***- Vincent Capezzuto***	**Review evaluation criteria package**
ATO-E SBS Western Service Area ***- Jere Hayslett, Jim Wright*** **UAA Training Lead** ***- Leonard Kirk*** **AIR** ***- August Asay*** **AFS** ***- John Harrington, Richard Girard*** **Wings of Alaska** ***- Mike Stedman, Don Bach***	**Score alternatives based on evaluation criteria**
ATO-E SBS Program Management ***- Shahan Stepanian***	**Develop cost estimates for alternatives**

Evaluation Criteria and Weights

Evaluation Criteria	Weight
Schedule - Procurement - 40% - Installation – 40% - Certification – 10% - Training – 10%	40%
Performance / Capability - Operator Acceptability – 60% - Display Features – 40%	60%

Alternatives Definition

Risk Assessments being conducted on 3 alternative Solutions

- **Alternative 1: Continue Current Process for Certification of Compatible Chelton Software**
- **Alternative 2: Replace Chelton Display with Compatible Display**
- **Alternative 3: Install Temporary Portable Compatible Display in Addition to Chelton Display**

Summary of Scores and Cost

Alternative 1: Continue Current Process for Certification of Compatible Chelton Software					
Criterion	**Sub-criterion**	**Total Scores**	**Sub-criterion Weights**	**Criterion Weights**	**Effectiveness**
Execution Schedule	Procurement	Green	40%	40%	Green
	Installation	Green	40%		
	Certification	Yellow	10%		
	Training	Yellow	10%		
Performance / Capability	Operator Acceptability	Green	60%	60%	Green
	Display Features	Green	40%		

	Alternative 1
F&E Total Cost ($K)	$204.8

Cost Driver: Training

Alternative 2: Replace Chelton Display with Compatible Display					
Criterion	**Sub-criterion**	**Total Scores**	**Sub-criterion Weights**	**Criterion Weights**	**Effectiveness**
Execution Schedule	Procurement	Red	40%	40%	Red
	Installation	Red	40%		
	Certification	Yellow	10%		
	Training	Red	10%		
Performance / Capability	Operator Acceptability	Yellow	60%	60%	Yellow
	Display Features	Yellow	40%		

	Alternative 2
F&E Total Cost ($K)	$1,255.6

Cost Driver: Procurement

Alternative 3: Install Temporary Portable Compatible Display in Addition to Chelton Display					
Criterion	**Sub-criterion**	**Total Scores**	**Sub-criterion Weights**	**Criterion Weights**	**Effectiveness**
Execution Schedule	Procurement	Red	40%	40%	Yellow
	Installation	Yellow	40%		
	Certification	Yellow	10%		
	Training	Yellow	10%		
Performance / Capability	Operator Acceptability	Yellow	60%	60%	Yellow
	Display Features	Yellow	40%		

	Alternative 3
F&E Total Cost ($K)	$530.4

Cost Driver: Procurement

*** Open action item: Certification of Alternative 3**

Risk Summary

- **Alternative 1**
  - Chelton 6.0B software may not be delivered on time
  - Upgraded Chelton display may not receive certification approval
- **Alternative 2**
  - Using a potential mix of avionics equipment creates interface and inventory concerns
  - Cost of new equipment is unknown
  - New equipment may not receive certification approval
- **Alternative 3**
  - Cost of new equipment is unknown
  - New equipment may not receive certification approval

Preferred Alternative

- **Alternative 1: Continue Current Process for Certification of Compatible Chelton Software**
  - Highest effectiveness
  - Lowest cost
  - Tied for lowest risk
  - Work toward this alternative is currently underway

Recommendation

- **Proceed according to current schedule for delivery and certification of Chelton 6.0B software**
- **Contingency**
  - Prepare to initiate process for temporary portable displays if 6.0B software is delayed
    - Develop scope of work for procurement
    - Perform cost/benefit analysis for ADS-B In during the 2008 flying season
    - Set October 12 as trigger date (6.0B delivery planned for October 4)
  - Establish trigger date to begin contract default process with Chelton if necessary
    - Evaluate impact to operators

Next Steps

- **Generate analysis report: 9/21/2007**
- **Open Action Item: resolve certification of Alternative 3**
- **Program office and contracting officer to visit Chelton to brief analysis results and obtain status**
- **Avionics Transition Plan: 12/2007**
- **Open SBS program risks**
  - Delivery of Chelton 6.0B software
  - Certification of avionics configurations
- **Implement solution: 3/2008**

AIC UPDATE

- AIC continues to meet bi-weekly
- Site Implementation Team
- Avionics Equipage Team
- External Coordination Team
- Final Plan v7.1
- Coordinate, State, Federal and FAA interests

FAA and Industry Responsibilities

Deployment Time Period	Ground Infrastructure Deployment SV (enroute-low altitude)	Safety Avionics Equipage
FY 07 – FY 09	6 – Anchorage-Fairbanks 11 – Nome-Seward Peninsula 13 – Kotzebue-NW AK 1 – Southeast AK Additional complete Capstone Phase 1 & 2	• End of FY 08: 525 equipped or committed • End of FY 09: 1,325 equipped or committed
FY 08 – FY 10	3 - Cook Inlet-Kodiak 4 - AK Peninsula 5 - Lake Clark-Bristol Bay	• End of FY 10: 2,325 equipped or committed
FY 09 – FY 11	8 – Upper Yukon River 12 – Galena-Mid Yukon River-Koyukuk River 14 - North Slope	• End of FY 11: 3,325 equipped or committed
FY 10 – FY 12	2 – Prince William Sound-Gulf of Alaska 7 - AK Highway Copper River Isabel Pass 9 – McGrath-Upper Kuskokwim 10 – Yukon-Kuskokwim Delta	• End of FY 12: 4,091 equipped or committed

OPERATIONAL UPDATE

- **Performance Based Navigation (PBN)**
  - Status
- **Expansion of Surveillance Services**
  - FAA approved 5NM separation standards for Y-K Delta **5/31/07**
  - Approximately 200 aircraft Capstone equipped
  - MEARTS Box Removal
- **Congressional/Outreach Activities**
  - Congressman Hayes visit
  - WIA Conference in ANC

Technical Update

SBS/Segment I (FY 07-10)

- **Southwest Phase I**
  - 5 Ground Based Tranceivers (GBT's) providing critical services
  - 5 GBT's providing essential services

- **Southeast Phase II**
  - Ground Stations
    - Approximately 180 aircraft Capstone equipped
    - 10 sites fully operational providing Essential Services.
    - Joint Acceptance Activities scheduled for QAA, QA5
      - Completion expected September 30, 2007.
    - Initial acceptance activities at QAY
      - Completion expected October 30, 2007
  - Wide Area Multilateration (WAM)
    - System Architecture under development
    - Site selections complete
    - Site Engineering and Design in progress
    - Contract Proposal under review
- **Service Volume 6 (ANC-FAI), 11 (OME), and 13 (OTZ)**
  - Started Deployment of Initial Service Volumes in July O7
  - 23% of the total FAA reported yearly flight hours
  - Surveys completed for 5 GBT's (Kotzebue, Nome, Curry, Anchorage, Fairbanks)
  - 4 Automated Weather Sensing Systems (AWSS) (Brevig –Mission,White Mountain, Robert Bob Cutis, Shaktoolik)