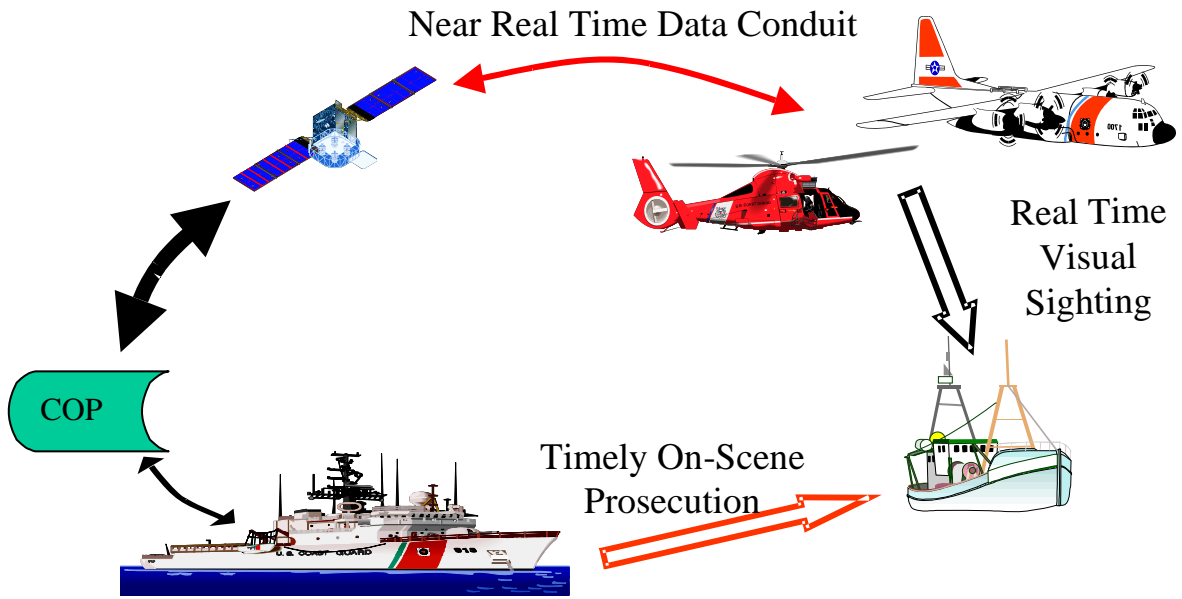


Airborne Data Communication System



CDR Rick Christoffersen



History

- 2003 - MBP (Team of 5)
- 2004 - COMDT Authorizes Project
- 2007 - Contract with Navy & LM Technology Services



Scope

- Near-Real-Time exchange of Vessel Sighting Data.
- Automated Asset Tracking

Sighting Information

New Sighting Save More... Unit Op. Info Close

Sighting Time (Z): [13 : 09] [04/26/20]

Lat: [32 °] [12.0] S Ex: 45 32.4 N

Lon: [077 °] [12.0] W Ex: 085 32.4 W Plot on Falcon/View

Number: [1046707] U.S. Doc Number search: Local

Name: [NEW RIVER] MISLE

Call Sign: - Clear Data

Flag: US - UNITED STATES Change Flag

Halling Port: [WILMINGTON] State: [DE]

Length: [642] ft.

Course: [090] Speed: [12]

Activity: [UNDERWAY]

Colors: Hull: [Black] Cabin: [White]

Class Type: [Tank Ship]

Type: [Petroleum Oil Tank Ship] SANS Port Arrivals

Sub Type: [Oil Products Tank Ship] Notes

Operating Information

Close Save Back

Detection Method: [Visual]

Vsl Call Sign: [WTFO] Date

Last Port: [New York, NY] [04/01/2004]

Next Port: [Boston, MA] [04/30/2004]

* Note Date Format mm/dd/yyyy

PFDS # Worn

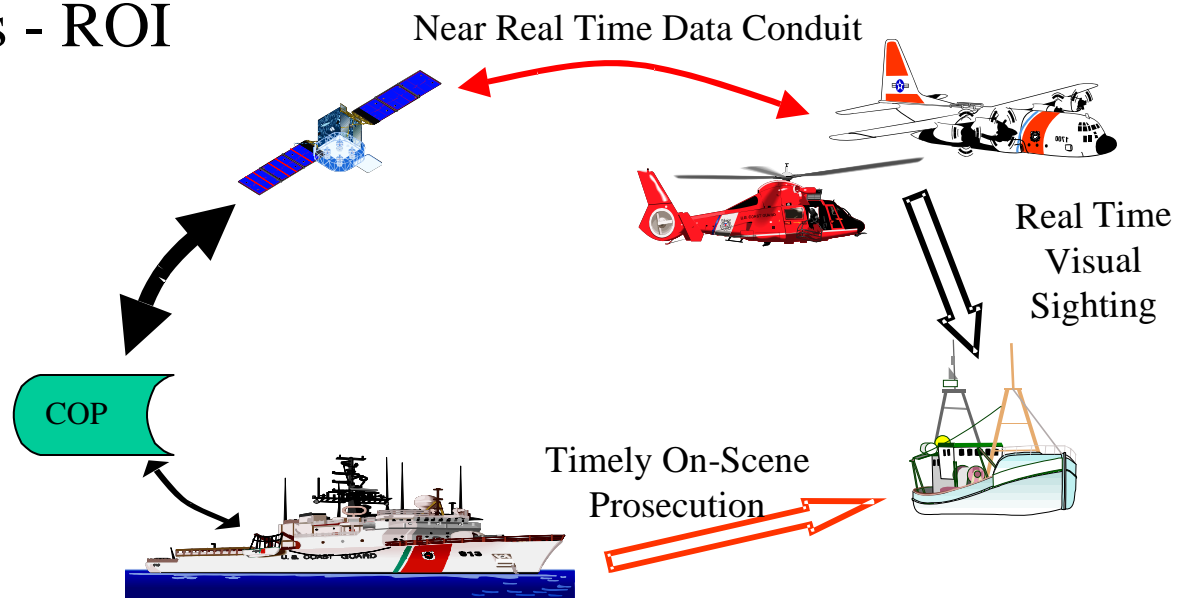
POB (Adult): [20] [] []

POB (Child): [] [] []

Current Use: Comm. Pass. Pleasure

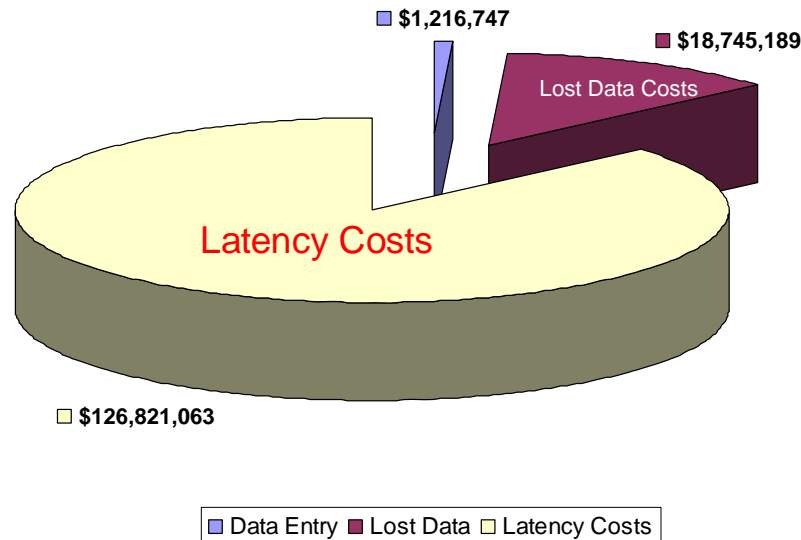
Great Idea, Great Process, Great Success

- Alignment with Organizational Goals
- Process Analysis
- Cost Driver Analysis
- Stakeholder Alignment
- Tangible Results - ROI



Cost Driver Analysis - 2003

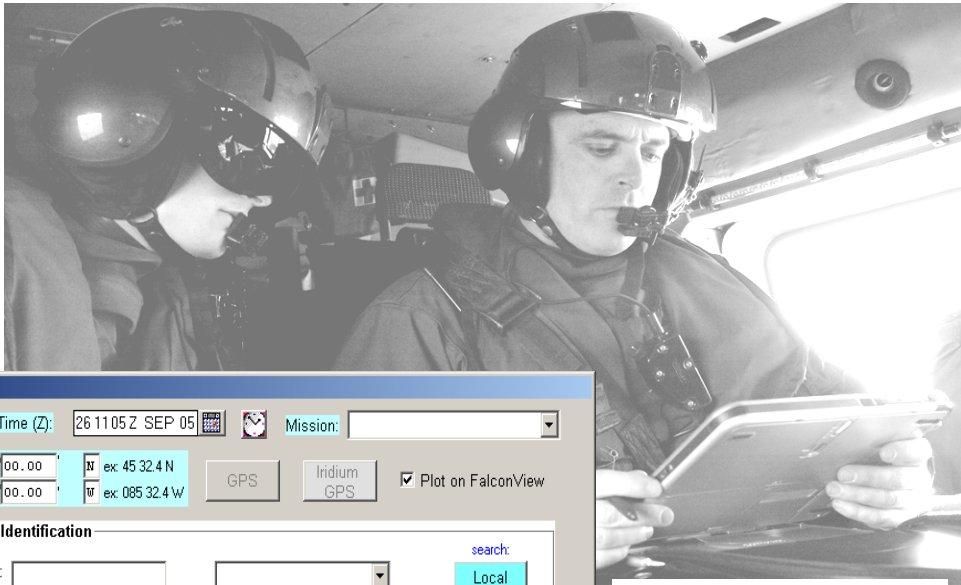
- \$20M in lost sightings and duplicate data entry
- \$127M of LE/MDA aircraft resource hours sub-optimized.



CG-Mission Planning System



MISLE Lite & FalconView



MISLE Lite - Microsoft Internet Explorer provided by HSC(T)

Address: http://swdb.osc.uscg.mil/desktop_boarding.asp

Date/Time	Type	Vessel
05/10/2005 14:28	CFVSE	G-OCC TEST VESSEL
05/11/2005 18:32	Boarding	G-OCC TEST VESSEL

Buttons: Open Activity, New Activity, Delete Activity, Delete All, Print Activity, Vessel Search, Export to MISLE, Export Activity, Import from PDA, Export to PDA, Lookout Search, Preferences

MISLE Data Extract

Vessel Extract: G:\MISLE_Extract.mdb Created: 03/04/2005 Updated: 08/29/2005

Party Extract: G:\MISLE_Parties_Enc.mdb Created: 03/04/2005 Updated: 08/29/2005

Buttons: Update Database, Get New Extract

Network: connected Hull/Tail Number:

Iridium Signal Strength GPS Unit Installed

Send Position with Exports Send Posits Automatically Send Position

Sighting Information

CG Contact History

Violation History

Documents

SANS Port Arrivals

Operating Info

Owner / Operator

Notes

Sighting Time (Z): Mission:

Lat: N ex: 45 32.4 N
 Lon: W ex: 085 32.4 W Plot on FalconView

Vessel Identification

Number:

Name: [click here for searching tips:](#)

Flag: US - UNITED STATES

Call Sign: Length: ft.

Hailing Port: State:

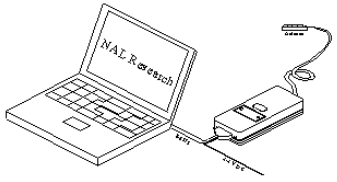
Course: Speed:

Activity: Class Type:

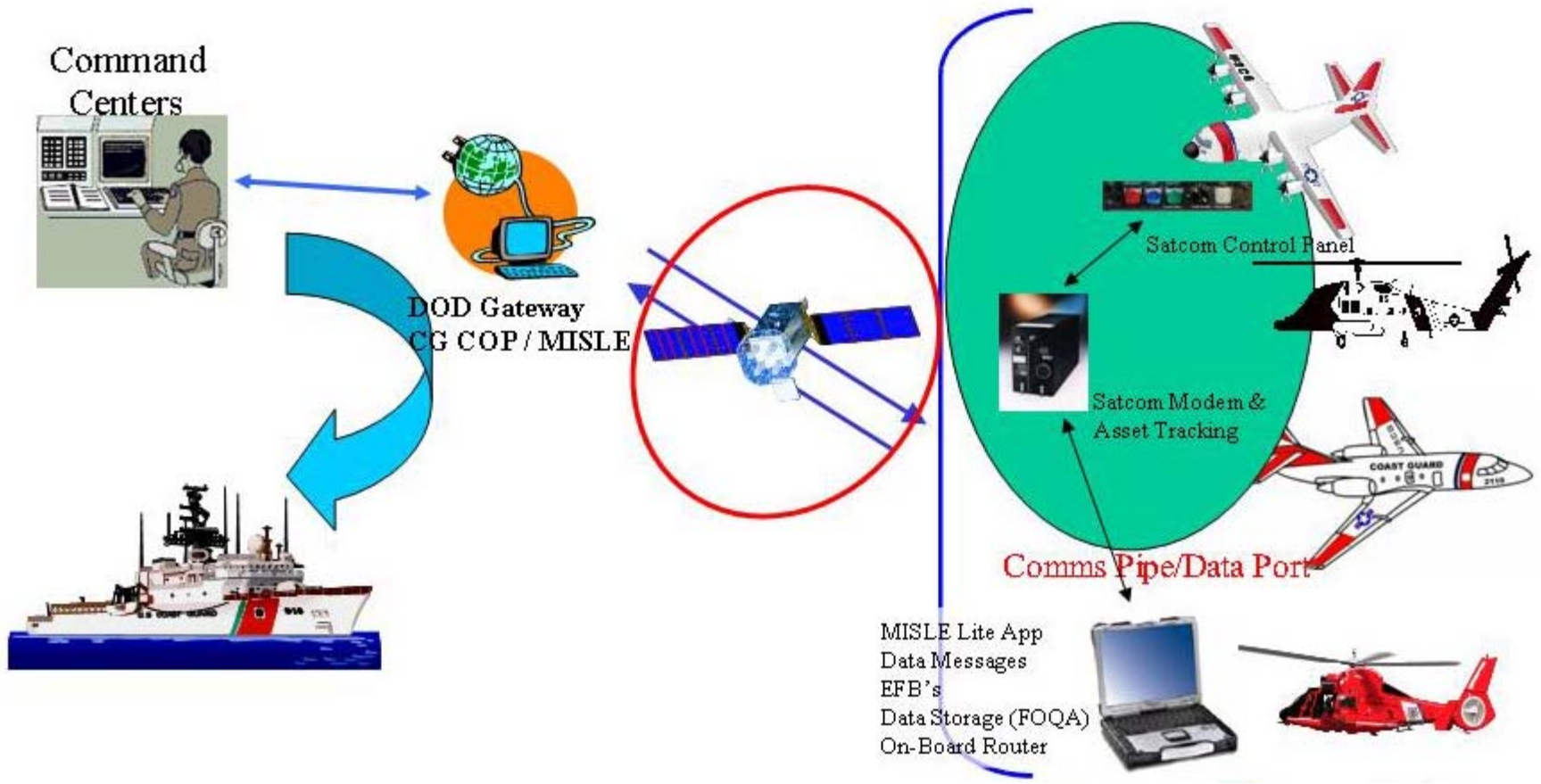
Hull Color: Type:

Cabin Color: Sub Type:

Buttons: New Sighting, Save, Clear Data, Close



ADCS "Comms" Architecture







Proof of Concept

- Airborne Test – 22 Sep 2004
- Passed EMI Soft-test
- Maintained comms link in forward flight –
 - 120kts
 - 30 degrees angle of bank
- Transmitted data to MISLE & COP
- ~Time to displayed on COP: 57 seconds



Return On Investment

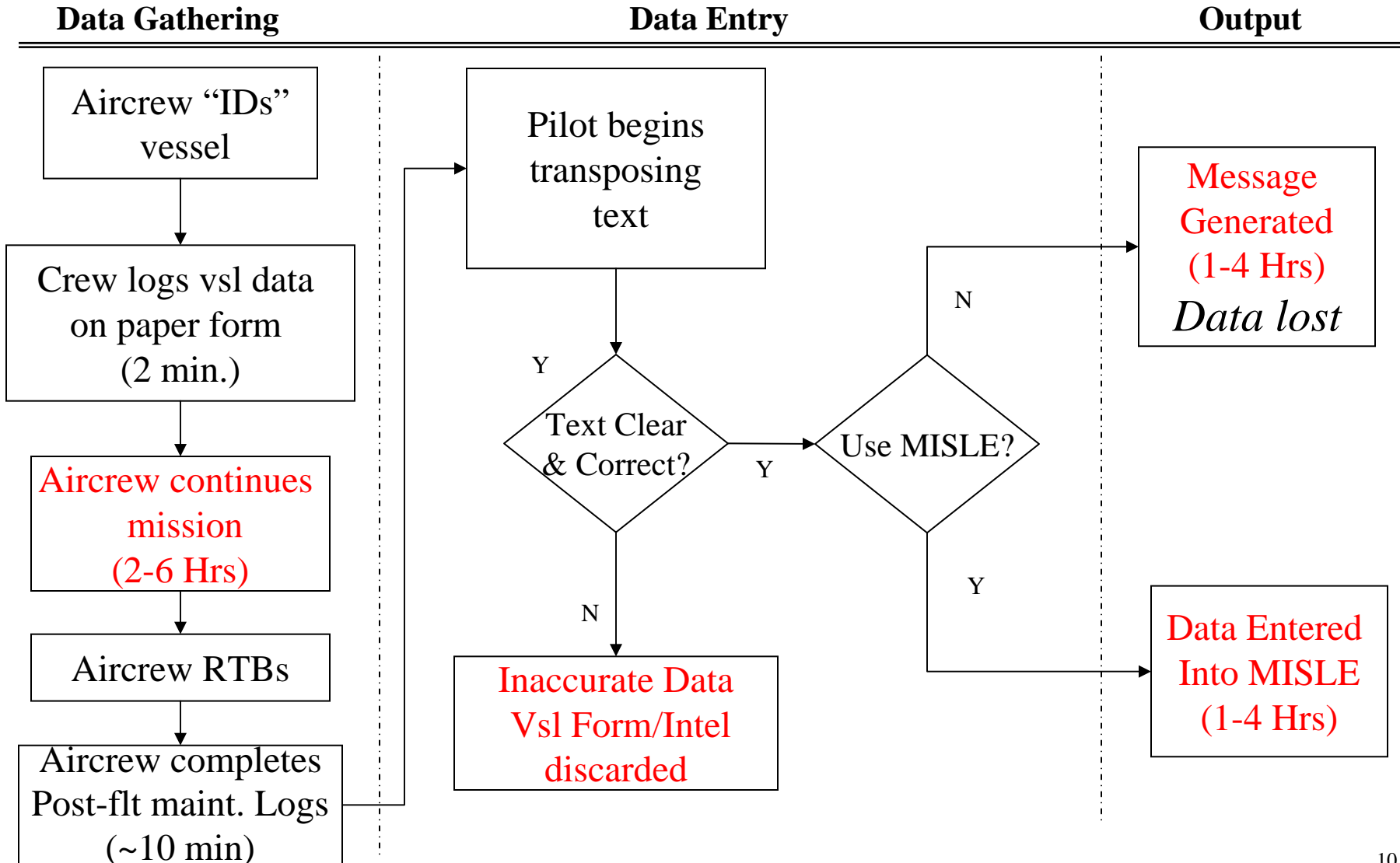
Note: 2003/2004 stats	Before	After		Advantages
Asset Status (Asset Position Reports)	Voice 15/30min (Radio & Paper)	Automated into COP (SPS 3.3.x Information Exchange)		Timeliness Accuracy Safety
Process Steps (VSL ID to data entry)	34	13		21 Less Steps
Cycle Time (Data Transfer)	210 Minutes (3.5 hours)	< 5 Minutes		98% Faster Cycle Time
Costs (Latency & Lost Data)	\$146.7 M (Waste)	\$8.5 M (Project Cost)		ROI 83:1



- MISLE Lite Pgm Mature
- Comms Pathway Dev'l
- MISLE data feeds COP
- COTS products
- Common Avionics System
- ADCS C-130 contract

CDR Rick Christoffersen

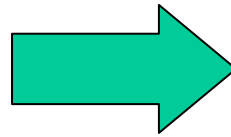




Linkages

Project Goals

- Near-Real Time Data Exchange
- Connectivity
- Data Integrity



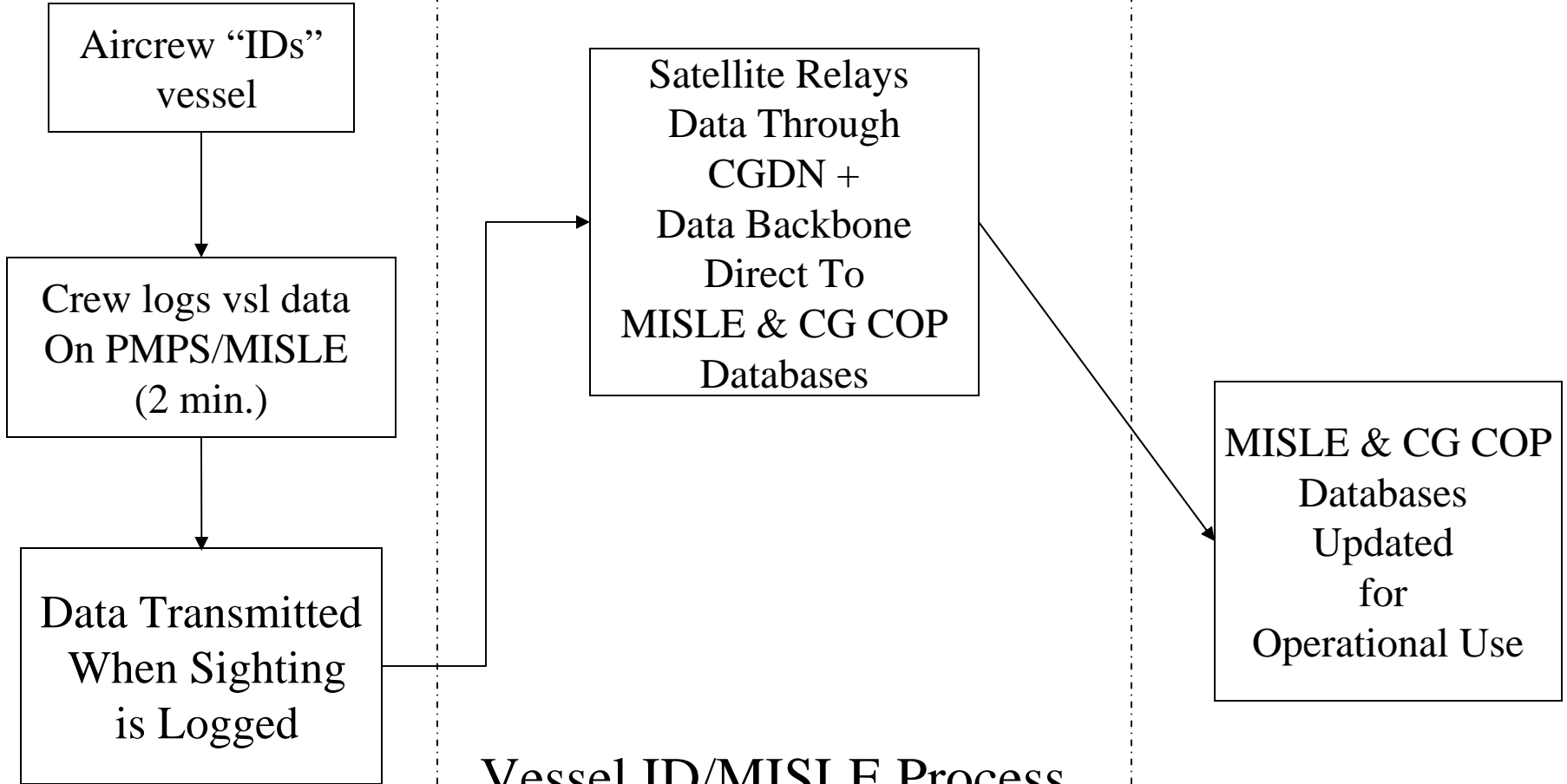
Organizational Goals

- Mission Effectiveness
- Operational Excellence
- Enhanced MDA
 - ALCOAST 160/04
(Est. MDA Office)
 - CG COP/MISLE

Data Gathering

Data Entry

Output



Vessel ID/MISLE Process
PMPS w/ Connectivity