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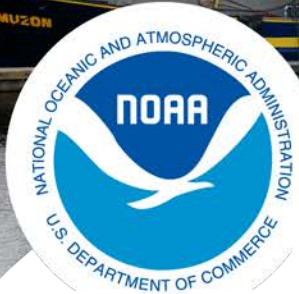
Cost of Electronic Reporting Options Used in Commercial e-Logbook Pilot and Progress Report on Voluntary e-Reporting Implementation for Commercial Vessels

GMFMC Meeting
October 17-21, 2016

Cost of electronic reporting options used in commercial e-logbook pilot



Pilot E-logbook costs

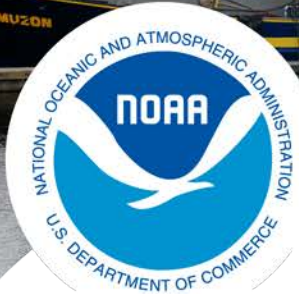


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- Hardware costs
 - current
 - primary devices
 - supporting devices
 - Pilot
- Software costs
- Total costs per vessel
 - Laptops and some tablets
 - iPads
- Data Transmission (no extra anticipated cost)
 - WiFi, Cellular, ISP (home)
- Total costs summary

Pilot E-logbook costs



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Primary hardware costs

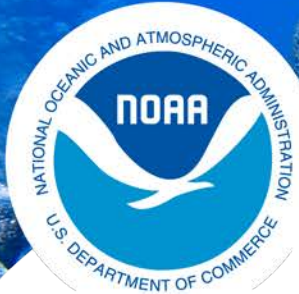
Hardware used in pilot

- Dell Latitude e6530: \$300-\$400
- Apple iPad2: \$210

Comparable hardware

- HP - 15.6" Laptop / AMD A6-Series \$270
- ASUS X550ZA \$540
- iPadPro \$800-\$1200
- Latitude 15 5000 Series \$1169
- Panasonic Toughbook (New) \$1200

Pilot E-logbook costs



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Supporting hardware used in pilot

- GlobalSat BU-353-S4 USB GPS Receiver \$30
- Garmin 18x USB GPS Navigator Unit \$72
- USB Booster Extension \$10
- wiring, Velcro, external charging outlets, etc. \$10-\$30

Pilot E-logbook costs



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Total Hardware Costs per Vessel for eLog Pilot

Computer (time of purchase)	USB-GPS Receiver	Misc. Hardware	Installation Costs (3-4 hrs)	Total Hardware/Install
Dell Latitude				
\$1100	\$50	\$30	\$200	\$1380
iPad2				
\$629	\$0	\$50	\$0	\$679

- iPad2 utilizes internal GPS, no wiring needed
- Laptops can be wired to existing onboard GPS/Chart plotter, but may accrue additional installation costs
- Pilot iPads were distributed with \$50 waterproof case

Pilot E-logbook costs



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3rd parties provide eLog software

ACCSP (eTrips), Electric Edge, Olrac, ...

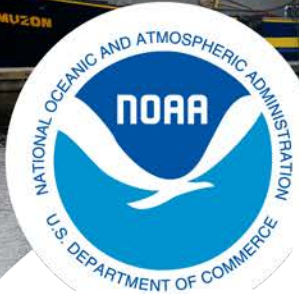
eLog licensing fees

- Licensing costs for eLogs will vary by vendor
- Licensing Costs here reflect estimates provided to the SEFSC and current market options
- Most vendors offer discounted licensing costs for bulk purchases



Pilot E-logbook costs

Laptop cost range: hardware & software



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Low end hardware		
Yearly License \$	Hardware & Install \$	Total Cost / Vessel \$
0	400	400
700	400	1100
1300	400	1700

High end hardware		
Yearly License \$	Hardware & Install \$	Total Cost / Vessel \$
0	1380	1380
700	1380	2080
1300	1380	2680



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iPad/Tablet Costs

Yearly License	iPad2 Costs \$	Cost per Vessel
0	679	679

- iPads used in the pilot utilized the eTrips¹ application \$0
- eLog reports generated on iPad/tablets can be submitted directly over 3G/4G cellular networks

1. eTrips does not meet current SEFSC eLog reporting standards- additional development planned

Pilot E-logbook costs



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Data Transmission

- During pilot nearly all logbooks submitted though WiFi or physically connecting to network
- Logbooks can also be submitted via 3G/4G cellular network –utilizes data plan
- When at-dock transmission (WiFi etc.) is not available, trip reports can be saved to portable hard drive and transmitted through land based internet network

Pilot E-logbook costs



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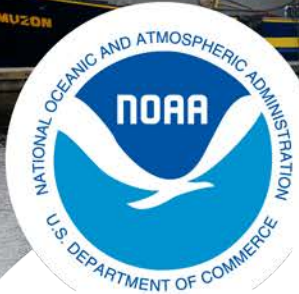
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Cost Summary

	Hardware	Yearly License	Hardware/Install	Cost Per Vessel \$
1 st year	Laptop (Lo)	0	400	400
1 st year	Laptop (Hi)	1300	1380	2680
1 st year	iPad2	0	679	679
1 st year	CLS/VMS	819	2249	3068
years 2+	Laptop (Lo)	0	0	0
years 2+	Laptop (Hi)	1300	0	1300
years 2+	iPad2	0	0	0
years 2+	CLS/VMS	759	0	759

Progress report on voluntary e-reporting implementation for commercial vessels

Voluntary e-reporting update



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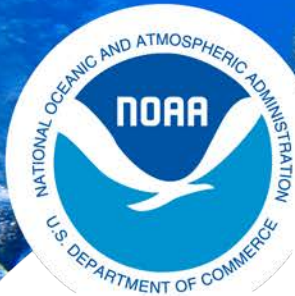
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Estimated time required to have an electronic logbook in production for SE vessels: \approx 6 months

Required tasks:

- Finalize variables needed by SEFSC
 - July-August
- Infrastructure changes needed at ACCSP
 - August-October
- Infrastructure changes needed at SEFSC
 - October-December
- Modifications to ACCSP and SEFSC applications
October-January
- Modify ACCSP API for 3rd party e-logbook software to deliver data to SAFIS
 - December-January

Voluntary e-reporting update



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Finalize variables to be collected by SEFSC logbook program:

- Select trip, catch and effort variables to be collected-done
- Ensure compatible variables with NE-done
- Work with SEFSC Social Science Research Group to determine which economic variables will be on e-logbook-done
- Verify with ACCSP that additional variables can be easily integrated into eTrips-done
- Determine formats and acceptable ranges for variables-ongoing



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Voluntary e-reporting update

Infrastructure changes needed at ACCSP:

- Set up SEFSC accounts in SAFIS Management System (SMS)-in progress
- Set up ACCSP access to SERO permit information-in progress
- Develop tool within SAFIS to track permits as they move from vessel to vessel
- Develop SE list tables to support database/application
 - SE species
 - SE ports
 - SE gears

≈ 3 Months: August-October

Voluntary e-reporting update

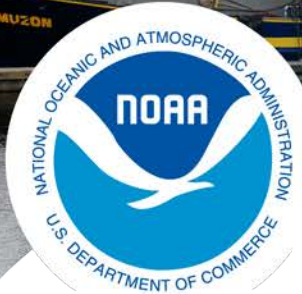


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Infrastructure changes needed at SEFSC:

- SEFSC develop user account system in eTrips based on operator card - "facilitates digital signature"
- Develop software to extract eTrips data from SAFIS and pass to SEFSC
- Develop software to integrate eTrips data with paper logbooks
- ≈ 3 Months to complete: October-December
- ✓ FIS funding secured to carry out these tasks in FY17



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Software changes needed by ACCSP

- Add SE variables to eTrips online:
 - September
 - ACCSP staff will complete
- Add SE variables to tablet app:
 - October-November
 - Contract out-need to identify funding
- Modify API to allow other vendors to submit data to eTrips:
 - December-January
 - ACCSP staff will complete



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Software changes needed at SEFSC:

- Develop portal to allow “No Fish” reports to be submitted
 - October-December
 - FIS funds on FY17 contract
- Develop portal to allow fishers to review submissions and identify suspect data
 - November-January
 - FIS funds on FY17 contract

Voluntary e-reporting update



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Summary of Required Tasks

- ✓ Finalize variables needed by SEFSC
 - In progress
- ✓ Infrastructure changes needed at ACCSP
 - In progress
- Infrastructure changes needed at SEFSC
 - October-December
- Modifications to ACCSP and SEFSC applications
 - Begins October
- Modify ACCSP API for 3rd party e-logbook software to deliver data to SAFIS
 - Begins December

Questions?