

Smart Voyage Planning

At a Glance

What is it?

Smart Voyage Planning (SVP) is a software application that is used to optimize ship routing on fuel savings. Ship board installations would interface with ECDIS-N, and shore-based installations would be used by fleet schedulers.

How does it work?

SVP software uses hull-form data combined with real time weather and current information to compute the best route.

What will it accomplish?

SVP capitalizes on real-time data and computing power to plot routes that have the potential to save 4% in annual fleet fuel cost.

Metrics

- Potential fuel Savings: 4% (552,000 bbls/year)

Applications

- Fleet-wide

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Optimization Wizard

Results

Route Selection : Update ETA : Route Optimization Settings : Processing
Data : Results

Routes Waypoints

Name	Cost (USD)	Fuel Cost (USD)	Savings (USD)	Savings (%)
Original	261526	257772	0	0
Max ETA Margin	236724	232957	24802	9
Min Cost	236724	232957	24802	9
Min Distance	236920	233153	24606	9
Min Hull Stress	247565	243698	13961	5
Min Head Wind	247565	243698	13961	5

Show all

Total Cost (USD)	236724	SOG	16.99 kn
Fuel Cost (USD)	232957	STW	17.79 kn
Fuel Use (TONS)	465.91	Max Wave	4.13 ft
Buffer Time (hh:mm)	08:52	Max Wind	15.98 kn
Distance	1246.01 NM		

Show Graph

Start Over Back Next

Description:

Smart Voyage Planning (SVP) is a capability that is deployed as a software application and uses fuel curves, weather, and ocean-current data, to plan optimal transit routes that minimize fuel usage. It extends the Naval vessel's electronic charting system, ECDIS-N.

The SVP tool would also be used ashore for Fleet Forces ship scheduling. It would provide fleet schedulers the analyses necessary to develop mission plans from a holistic viewpoint that bases ship and battle group assignments on predetermined criteria. The non-combat movement of Naval assets would be determined using minimized fuel usage as a primary focus. This tool would be similar to what large shipping companies use to optimize delivery (e.g. USPS, UPS, airlines).

Benefits:

SVP is a tool that allows the Navy to make smarter decisions on how to transit its ships and submarines. Fuel savings will be realized by analyzing existing conditions and plotting the most efficient route. The shore-based version enables the Navy to make smarter decisions on how to position its assets. The tool will optimize Naval asset locations based on mission need and proximity. Fuel savings will be realized by the need for fewer steaming days to move vessels.