



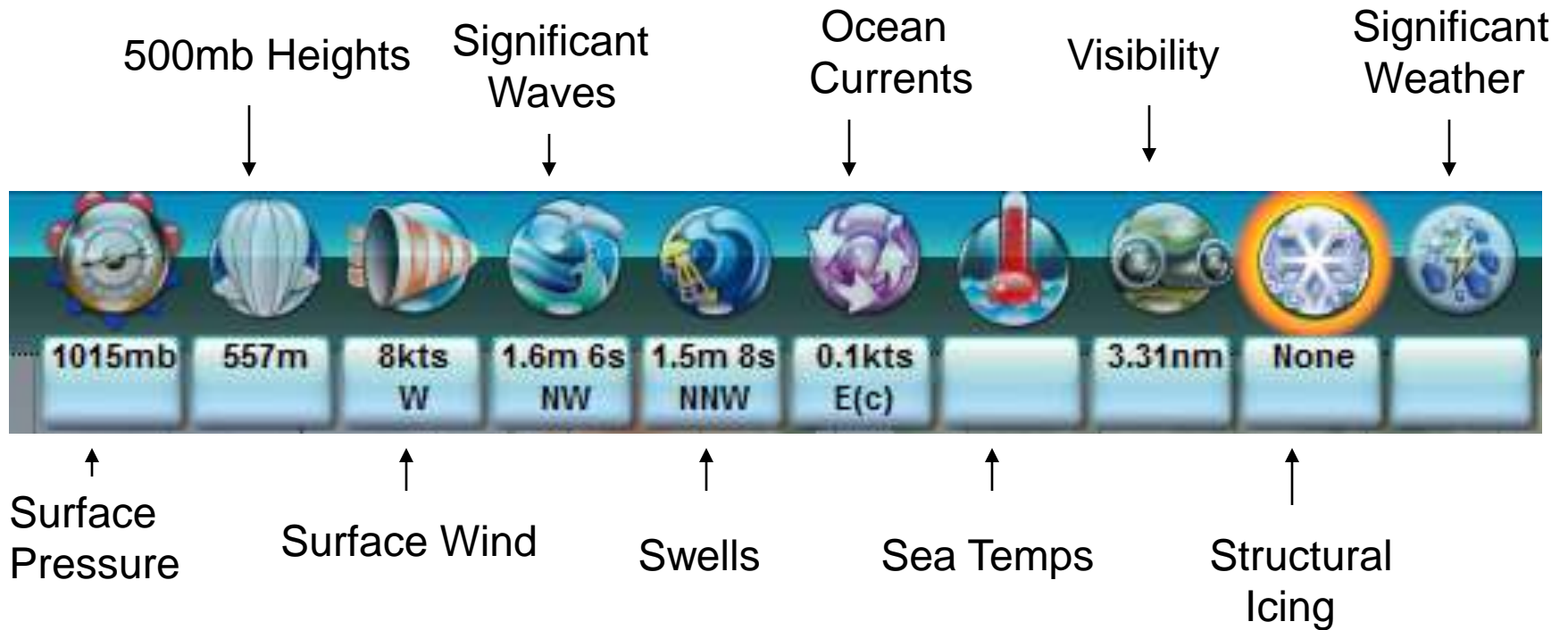
The Fleet Optimization Experts

Digital Ship 2009 Advances in High Resolution Data

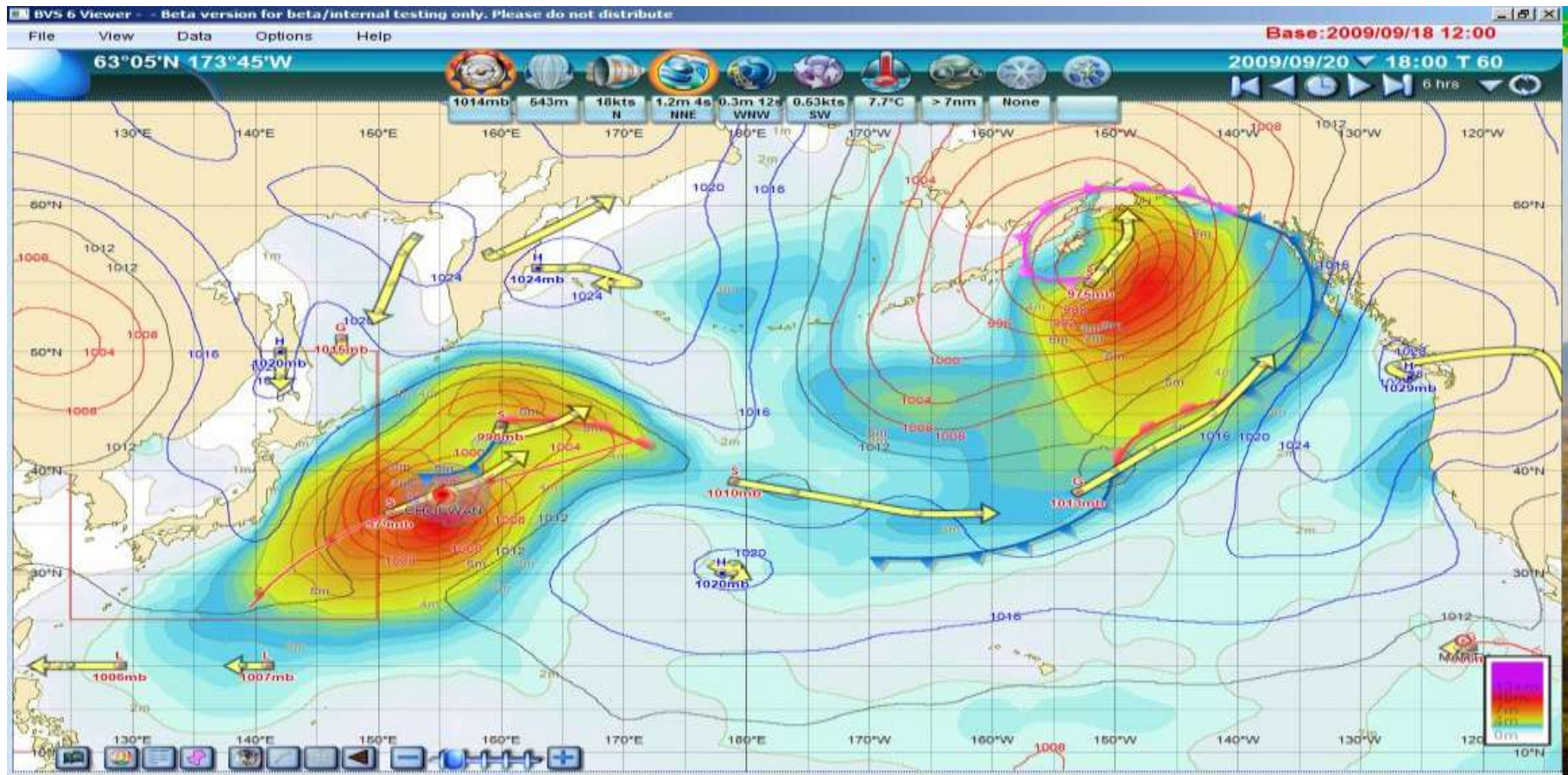


Oct 08th, 2009

Environmental Data



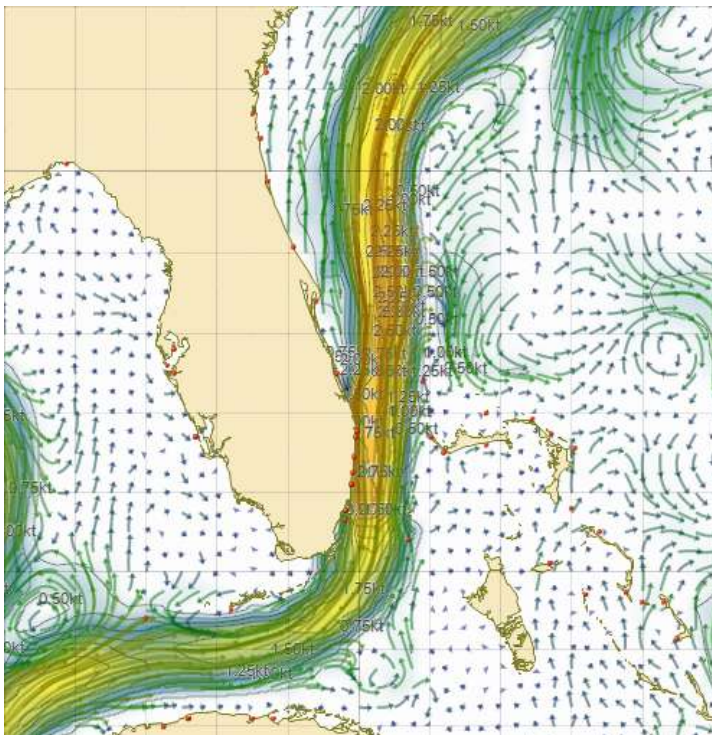
North Pacific: Sept 20, 2009



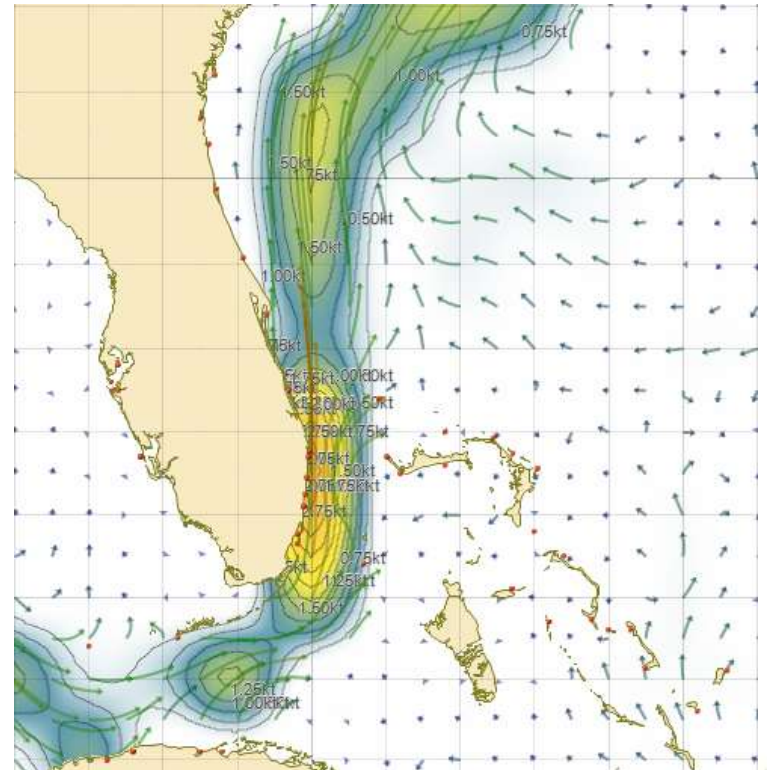
The Fleet Optimization Experts

Ocean Currents

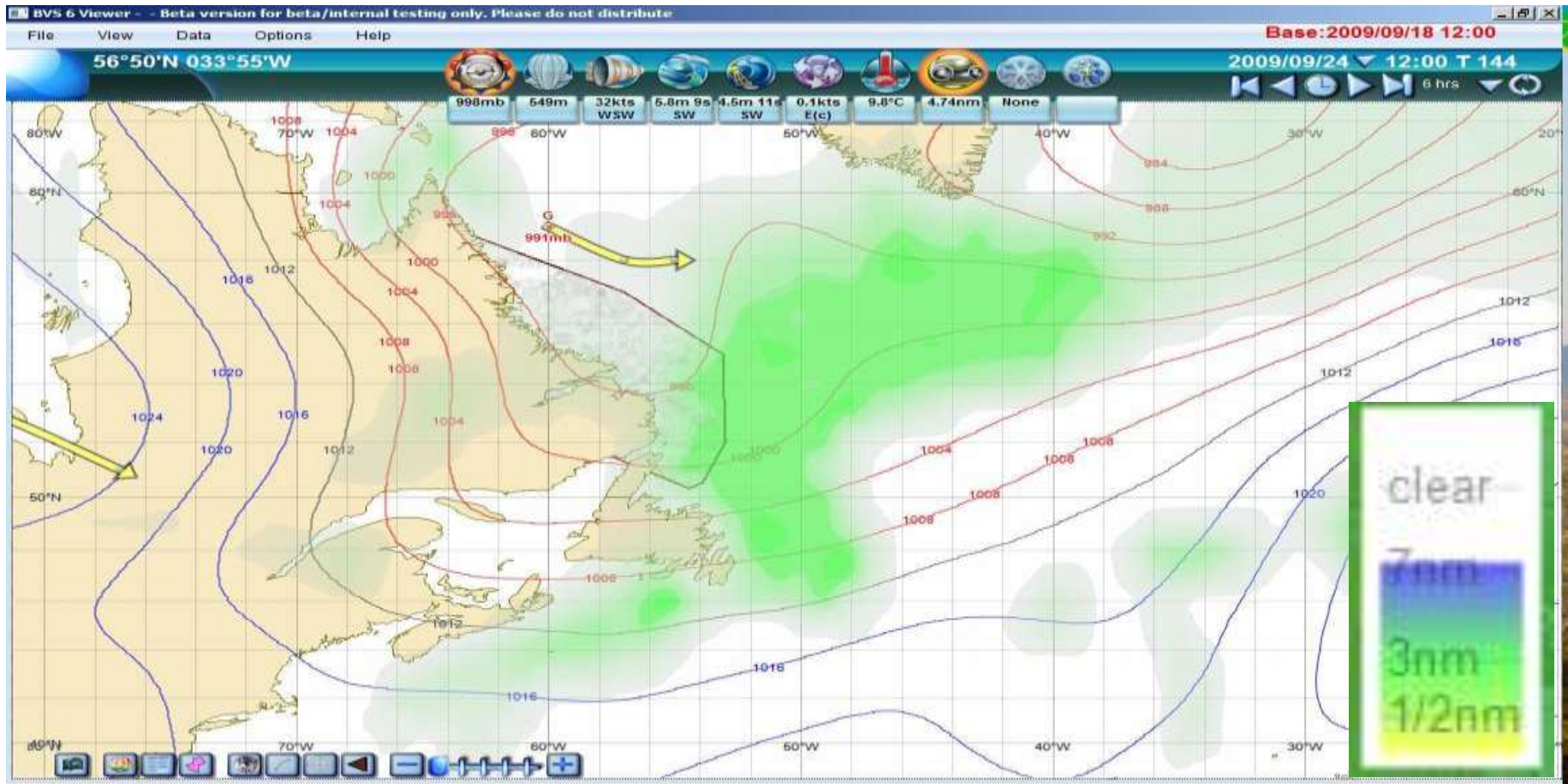
- NCOM Currents



- Pilot Chart Currents



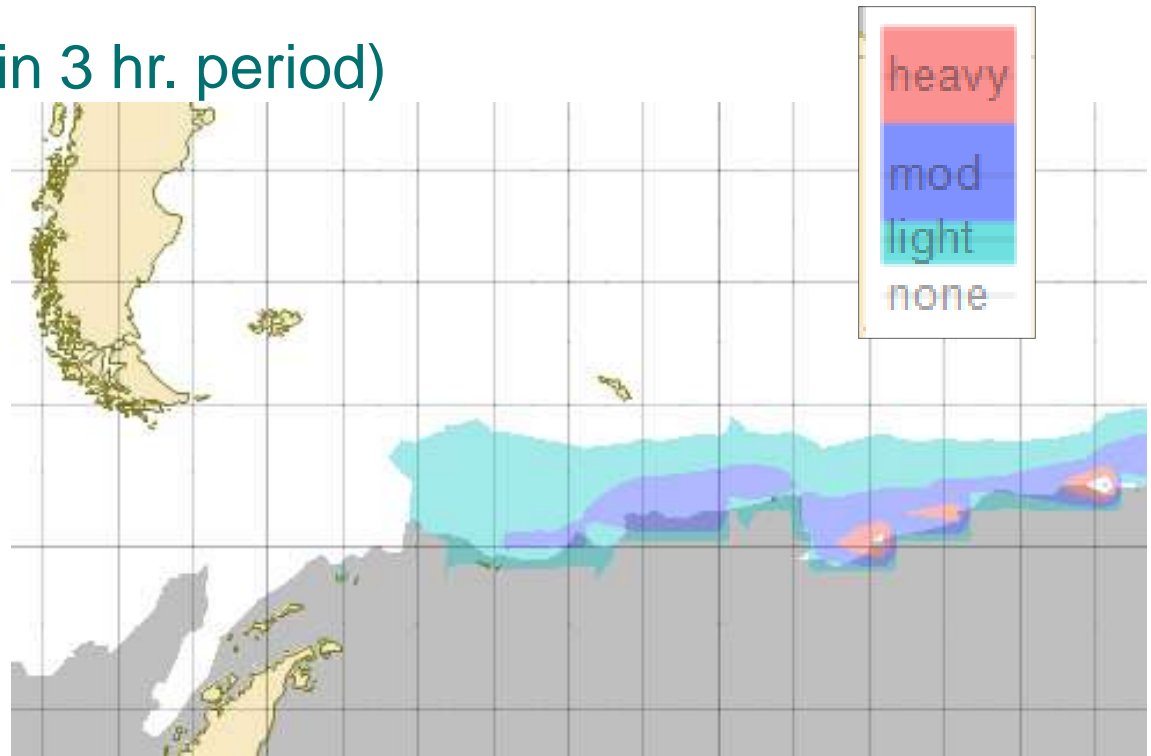
Visibility



The Fleet Optimization Experts

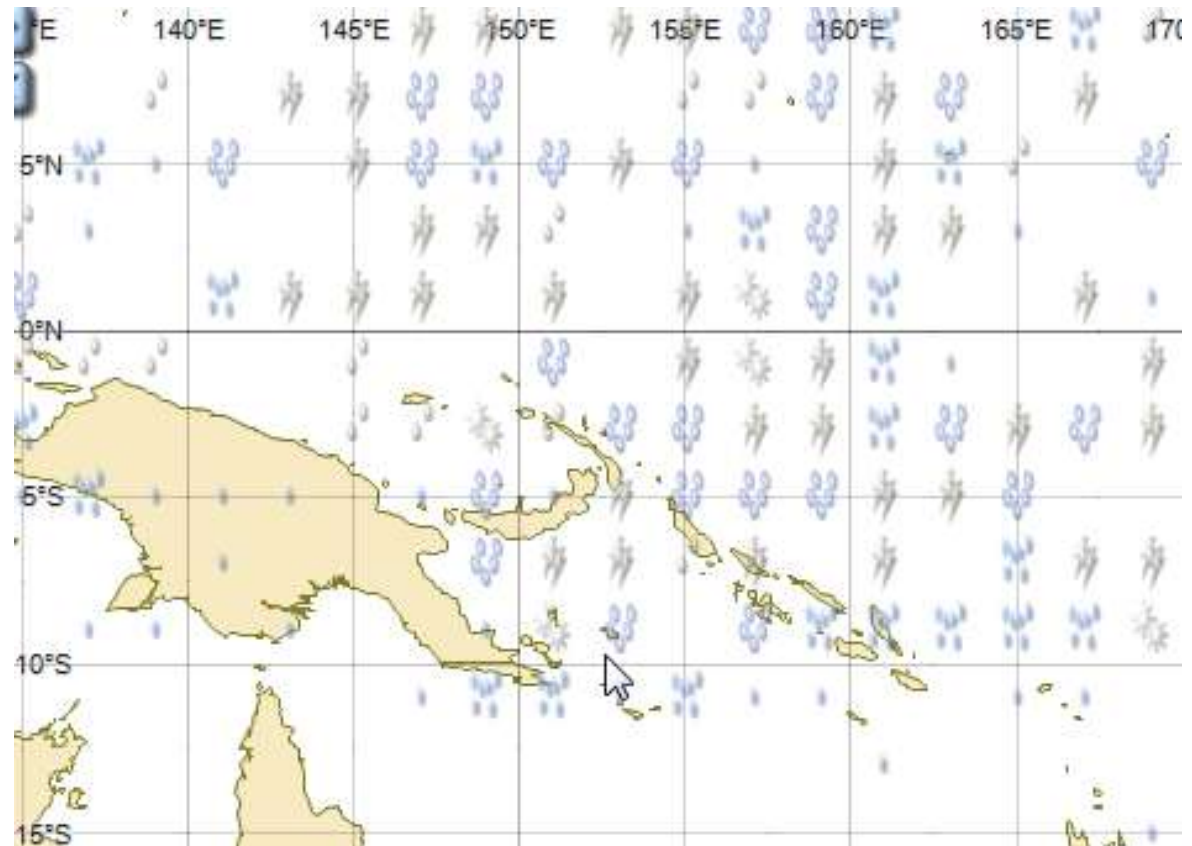
Structural Icing

- Vessel Icing (within 3 hr. period)
 - Light (0.1" – 0.8")
 - Moderate (0.8" – 2.4")
 - Heavy (2.4" and above)

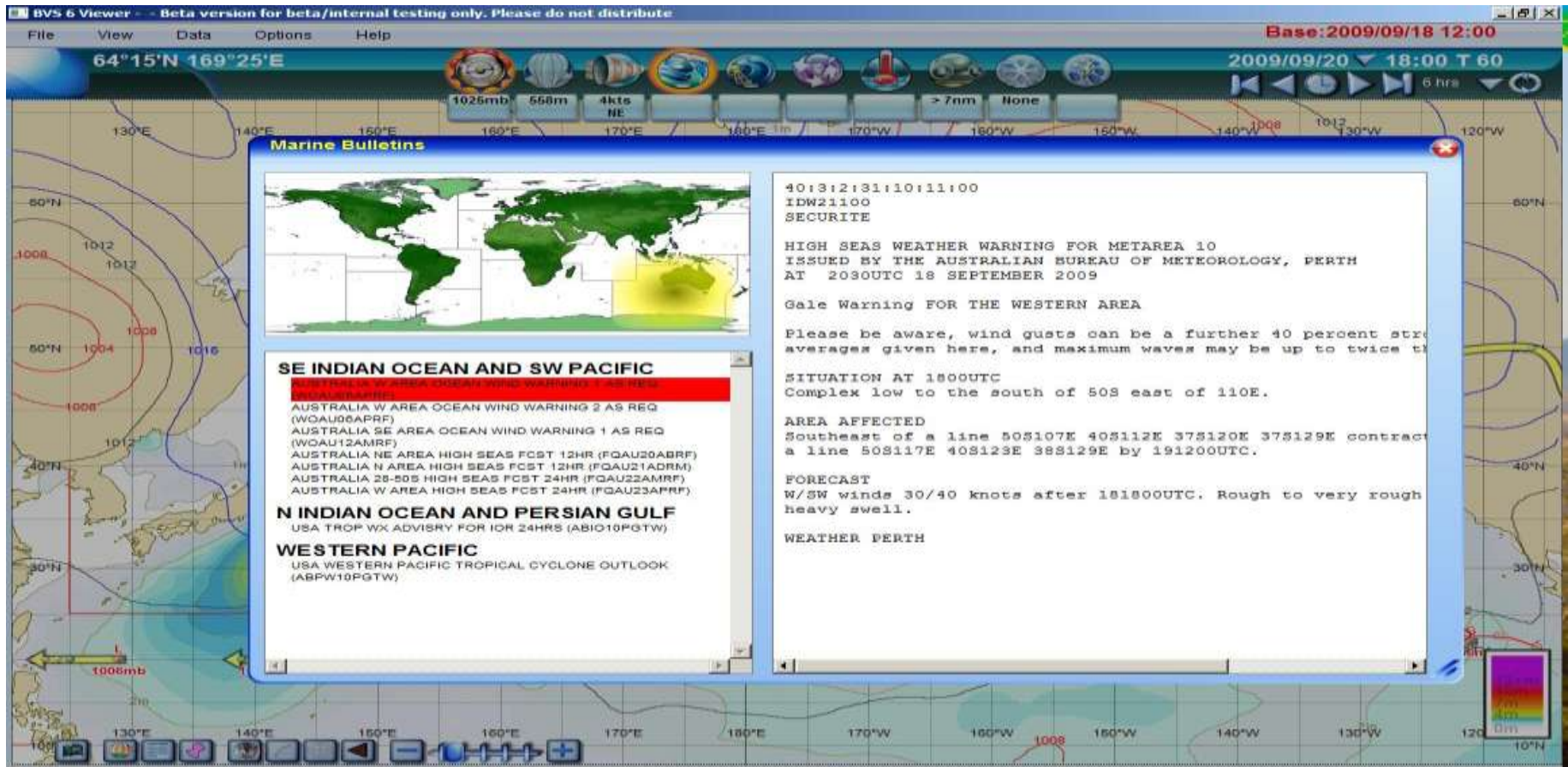


Significant Weather

- Weather Type
 - Drizzle
 - Rain
 - Freezing Rain
 - Thunderstorms
 - Snow



Government Data



The Fleet Optimization Experts

Forecast Updates

- Schedule Request Process
 - Toggle on desired products

Data Request
Estimated Forecast Size: ~98KB

Main Area | **Item Selection** | High-Res Data | Delivery Schedule

Category	Product	Size	Status
Atmospheric Weather	Pressure, Tropicals and Fronts are always included	~4 KB	<input checked="" type="checkbox"/>
	Wind	~17 KB	<input checked="" type="checkbox"/>
	500MB Height	~2 KB	<input checked="" type="checkbox"/>
	Visibility	~12 KB	<input checked="" type="checkbox"/>
	Precipitation	~12 KB	<input checked="" type="checkbox"/>
Others	Marine Bulletins	~18 KB	<input checked="" type="checkbox"/>
	Port Forecasts		<input type="checkbox"/>
	Satellite Image		<input type="checkbox"/>
Waves	Significant Wave	~10 KB	<input checked="" type="checkbox"/>
	Swell	~12 KB	<input checked="" type="checkbox"/>
Ocean	Current	~7 KB	<input checked="" type="checkbox"/>
	Sea Surface Temperature		<input type="checkbox"/>
Ice	Pack Ice & Bergs		<input type="checkbox"/>
	Vessel Icing		<input type="checkbox"/>

Buttons: Cancel | << Back | Next >> | Finish



Vessel Motion Alarms

- BVS customized to vessel type
- Voyage specific information entered
 - Graph displays motion risk

Snapshot

Alarms

Track Input

Propeller Calibration (at Sc/NCR power)

20.0 kts 100 RPM 10 % slip

	Position	Nav	Speed	Time
*	51°23'N 002°43'E	RL	24.0 SC	2009/07/26 00:
⌂	51°23'N 002°31'E	RL	24.0 SC	2009/07/26 00:
⌂	51°20'N 002°18'E	RL	24.0 SC	2009/07/26 00:
⌂	51°25'N 002°00'E	RL	24.0 SC	2009/07/26 01:
⌂	51°13'N 001°46'E	RL	24.0 SC	2009/07/26 02:
⌂	50°55'N 001°18'E	RL	24.0 SC	2009/07/26 03:
⌂	50°36'N 000°36'E	RL	24.0 SC	2009/07/26 04:
⌂	49°59'N 002°57'W	RL	24.0 SC	2009/07/26 10:
⌂	41°14'N 009°53'W	RL	24.0 SC	2009/07/27 11:
⌂	37°05'N 008°13'W	RL	24.0 SC	2009/07/27 22:
⌂	36°15'N 007°11'W	RL	24.0 SC	2009/07/28 01:
⌂	35°41'N 005°55'W	RL	24.0 SC	2009/07/28 04:
⌂	36°08'N 002°07'W	RL	24.0 SC	2009/07/28 12:
⌂	37°28'N 010°37'E	RL	24.0 SC	2009/07/29 14:
⌂	36°02'N 015°38'E	RL	24.0 SC	2009/07/30 01:
⌂	33°25'N 026°50'E	RL	24.0 SC	2009/07/31 01:
⌂	32°26'N 030°19'E	RL	24.0 SC	2009/07/31 09:
⌂	31°27'N 032°19'E			2009/07/31 14:

Resonance

Alerts/Thresholds

Parametric Roll	0.0	m	Synchronous Roll	0.0	m
High Wave Groups	0.0	m	Broaching	0.0	m

Ship

Draft		m
GM		m
Roll prd	00.0	s
Speed	23.6	kts
Heading	109	°

Swell / Wind-Wave

Height	00.3	00.0	m
Direction	354	000	°
Period	03.8	00.0	s
Wavelength	023	000	m
Enc.Period	29.5	00.0	s

Graph **Details** **Climatology** **Tracks**

High Resolution Data Yields

- Superior Voyage Optimization
 - basis steaming time
 - basis weather constraints
 - basis minimum fuel
 - basis fixed ETA
- Engine Performance Data
 - HP, Slip, RPM's can be evaluated basis specific wind, waves and ocean currents.
- Accurate weather and motion alarms
- Better ETA's

Expert Support

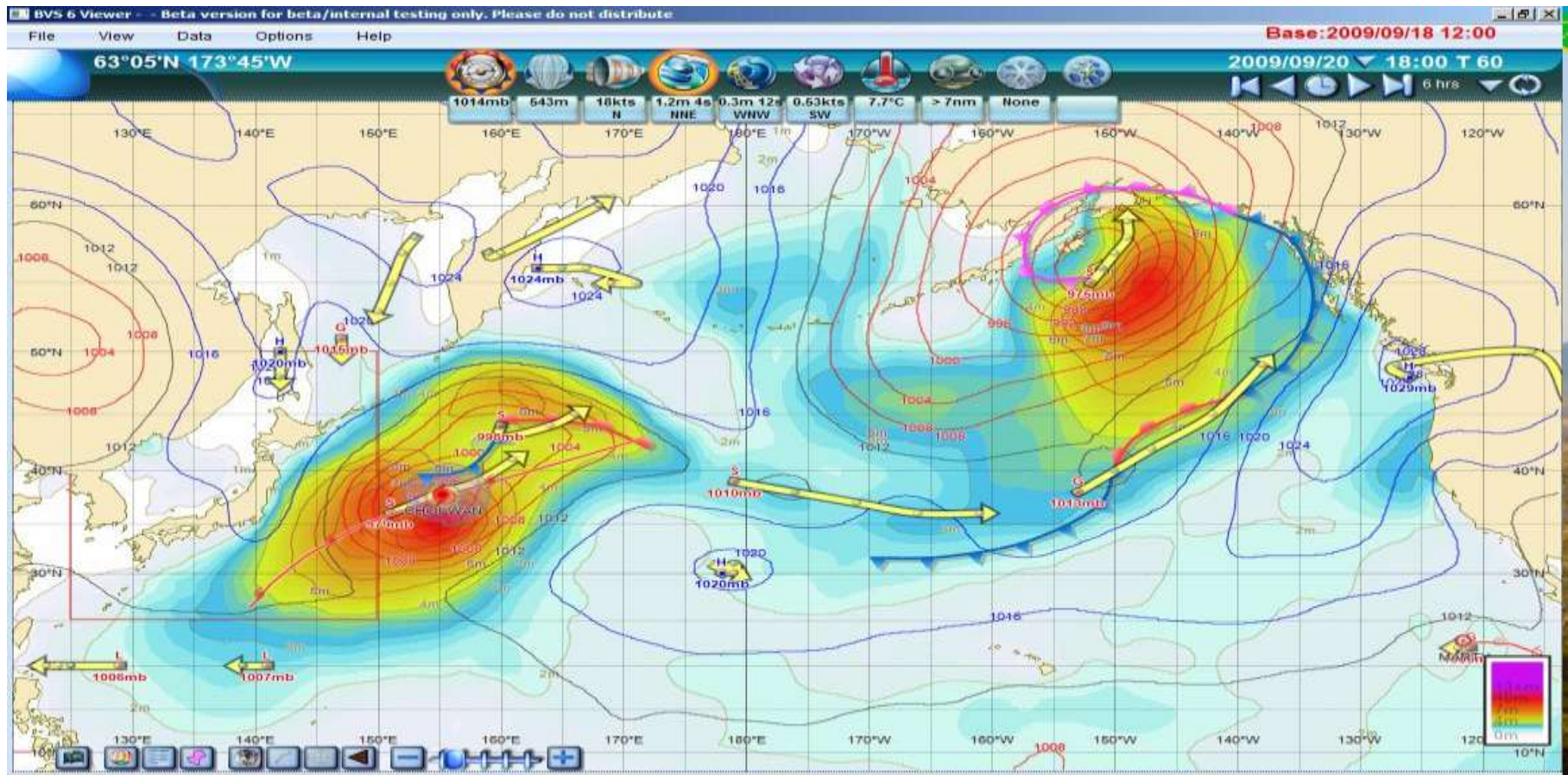
Marine Ops Staff > 40

Industry Experience > 660 years

At Sea Experience > 50 years

Why does this matter?

North Pacific: Sept 20, 2009



The Fleet Optimization Experts

Thank You



The Fleet Optimization Experts



Company Confidential