



PRINCE WILLIAM SOUND AREA COMMITTEE

October 5th, 2023

Agenda

0900-0915

Opening remarks from FOSC CDR Rousseau and SOSC Anna Carey.
Participant self Introductions

0915-0945

Kristina Arsenault (Maritime Cyber Security)

0955-1025

Barrett Salisbury, DNR (PWS Earthquakes)

1035-1105

Mike Day, SERVS (OSRB-5)

1115-1145

CDR Matt Richards, USCG (Alternative Planning Criteria)

1145 -Status Update on Geographic Response Strategy Subcommittee
-Status Update on Regional Stakeholders Workgroup
-Public comment and closing remarks

1200

30 Minute Tabletop Exercise Primer (participation encouraged)

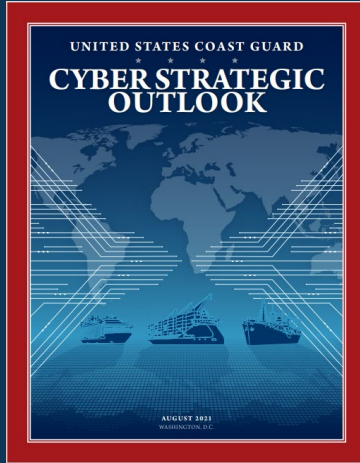
Opening Remarks



CYBERSECURITY AND THE MARITIME ENVIRONMENT

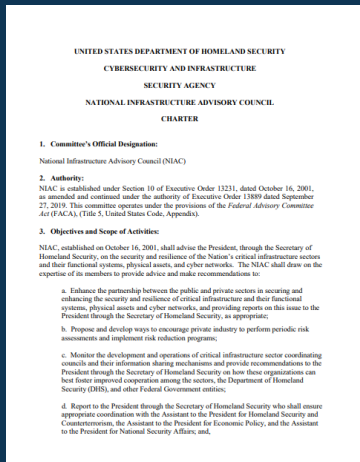
September 2023

MARINE TRANSPORTATION SYSTEMS & CYBERSECURITY (WHY IT MATTERS)



“Cyber attacks against the United States (U.S.) are one of the most significant threats to our economic and military power since World War II.”

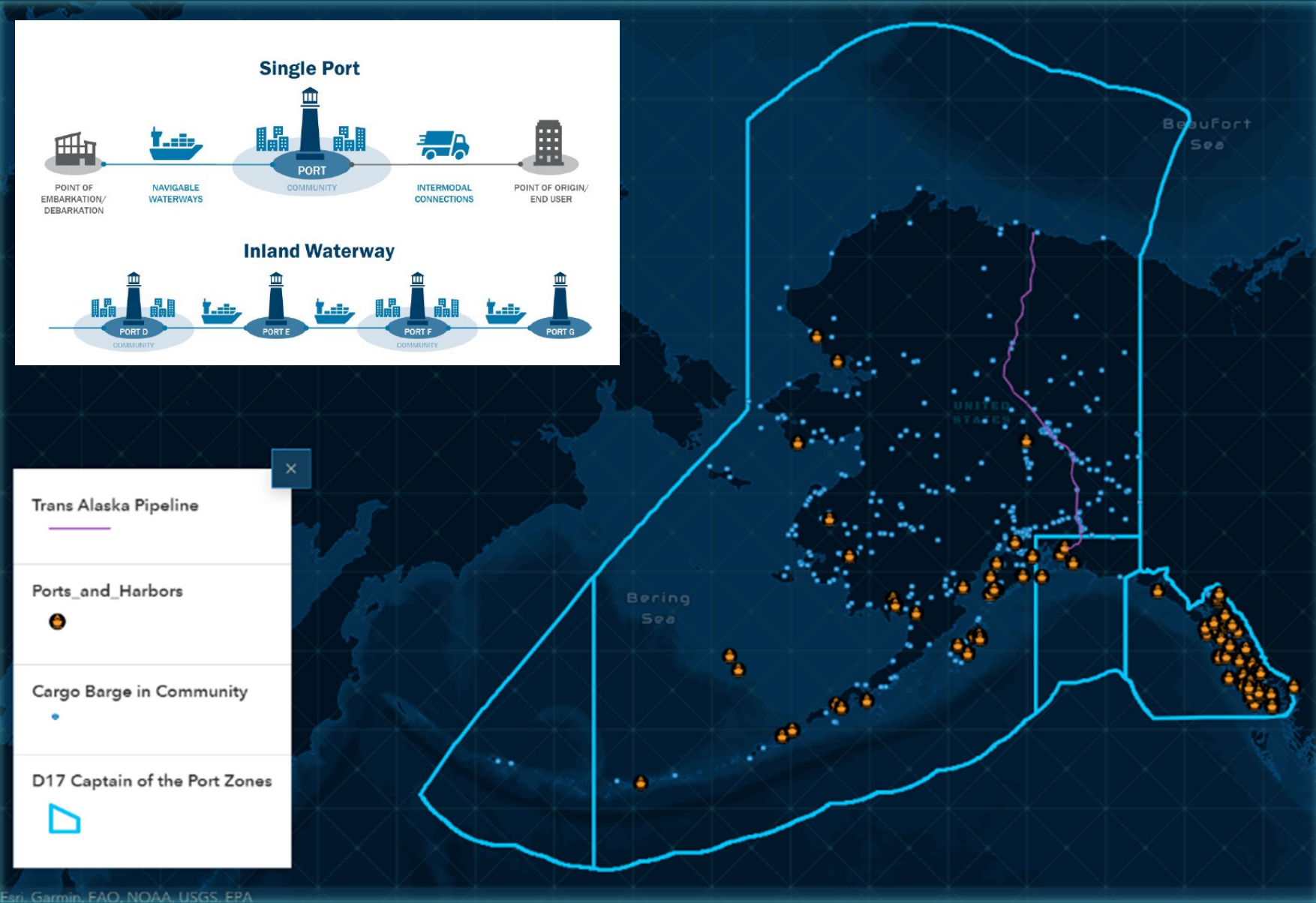
[*2021-Cyber-Strategic-Outlook.pdf \(uscg.mil\)*](#)



“Escalating cyber risks to America’s critical infrastructures present an existential threat to continuity of government, economic stability, social order, and national security... U.S. companies find themselves on the front lines of a cyber war they are ill-equipped to win, against nation-states intent on disrupting or destroying our critical infrastructure. Bold action is needed to prevent the dire consequences of a catastrophic cyber attack.”

[*President’s National Infrastructure Advisory Council report Dec 2019*](#)

SUPPLY CHAIN MANAGEMENT AND CYBER DEPENDENCY



GEOGRAPHIC ELEMENTS OF THE MARINE TRANSPORTATION SYSTEM



INFORMATION TECHNOLOGY & OPERATIONAL TECHNOLOGY (IT/OT)



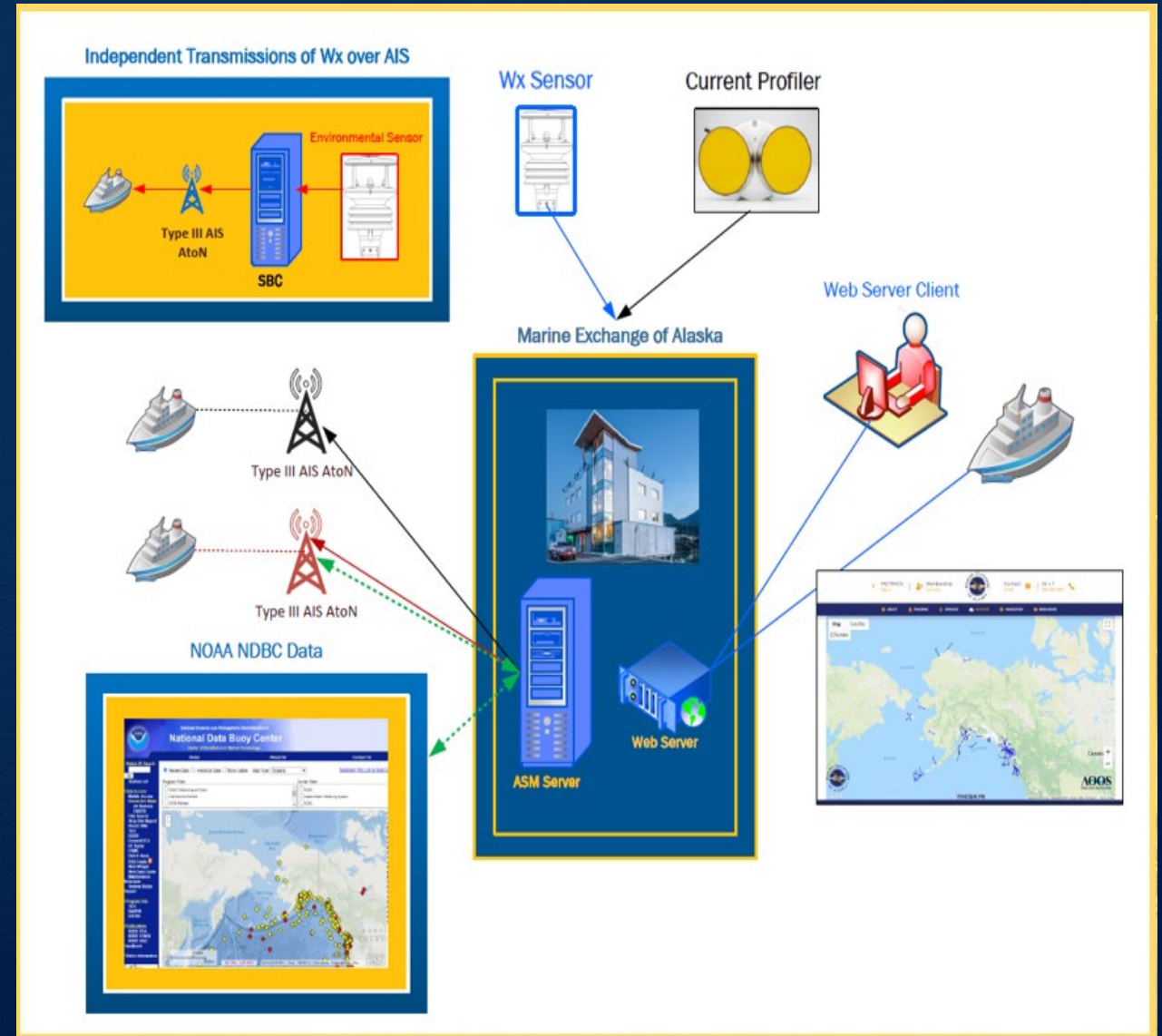
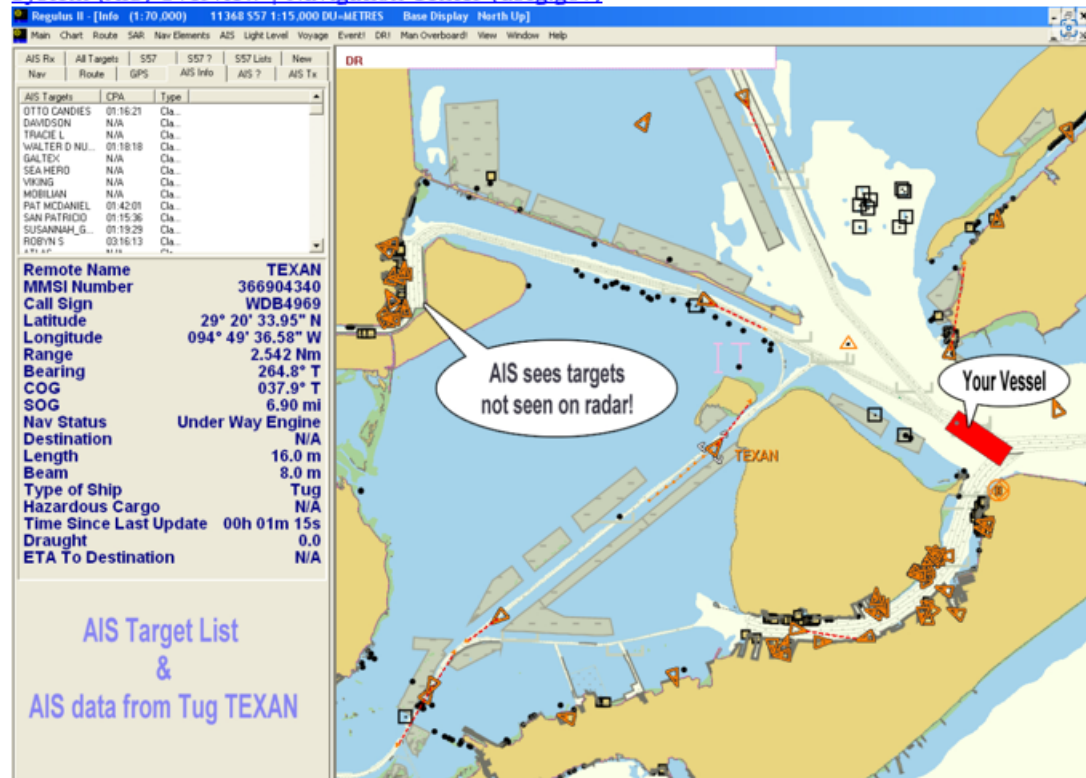
Business Systems	
Passenger Check-In Systems	Distribution
Telecommunication	Accounting
Email	Human Resource
E-Commerce	Performance Management
Enterprise Resource Planning	Custom Relationship Management
Sales	Enterprise Asset Management
Procurement	Business Intelligence
Inventory Control	
Operational Control Systems	
Distributed Control Systems	Alarm Systems
Ramp Control Systems	Fire Protection Systems
Terminal Operating Systems	Environmental Protection Systems (Spill Control)
Independent Safety Systems	Emergency Shut Down Systems
Building Management Control Systems	
Building Automation Systems	Energy Management Systems
Vertical Transport Systems (Elevators, Escalators)	Exterior Lighting Control Systems
Interior Lighting Control Systems	HVAC Systems
Digital Video Management Systems	
Building Safety Systems	
Fire Alarm Systems	Public Safety/Land Mobile Radios
Fire Sprinkler Systems	Smoke and Purge Systems
Gas Detectors	Emergency Management Systems
Security Systems	
Physical Access Control Systems	Screening Systems

POTENTIAL MARITIME OPERATIONAL ATTACKS

- Disruption/Delay: Could be as fundamental as not having access to passenger/cargo manifests, schedules, loading plans, etc.
- Navigation: Global Positioning System (GPS) or shipboard Automatic Information System (AIS) jamming/spoofing
- Operational Technology: Remote hijacking of vessel or shoreside equipment control systems
- Blockages: Cyber related disabling of bridges or locks, or disabling of a vessel in a navigation choke point

Automatic Identification System (AIS) Overview

Imagine a shipboard radar or an electronic chart display that includes a symbol for every significant ship within radio range, each with a velocity vector (indicating speed and heading). Each ship "symbol" can reflect the actual size of the ship, with position to GPS or differential GPS accuracy. By hovering over an AIS icon, you can learn the ship name, course and speed, classification, call sign, registration number, MMSI, and other information. [Automatic Identification System \(AIS\) Overview | Navigation Center \(uscg.gov\)](#)



CRITICAL INFRASTRUCTURE SECTORS

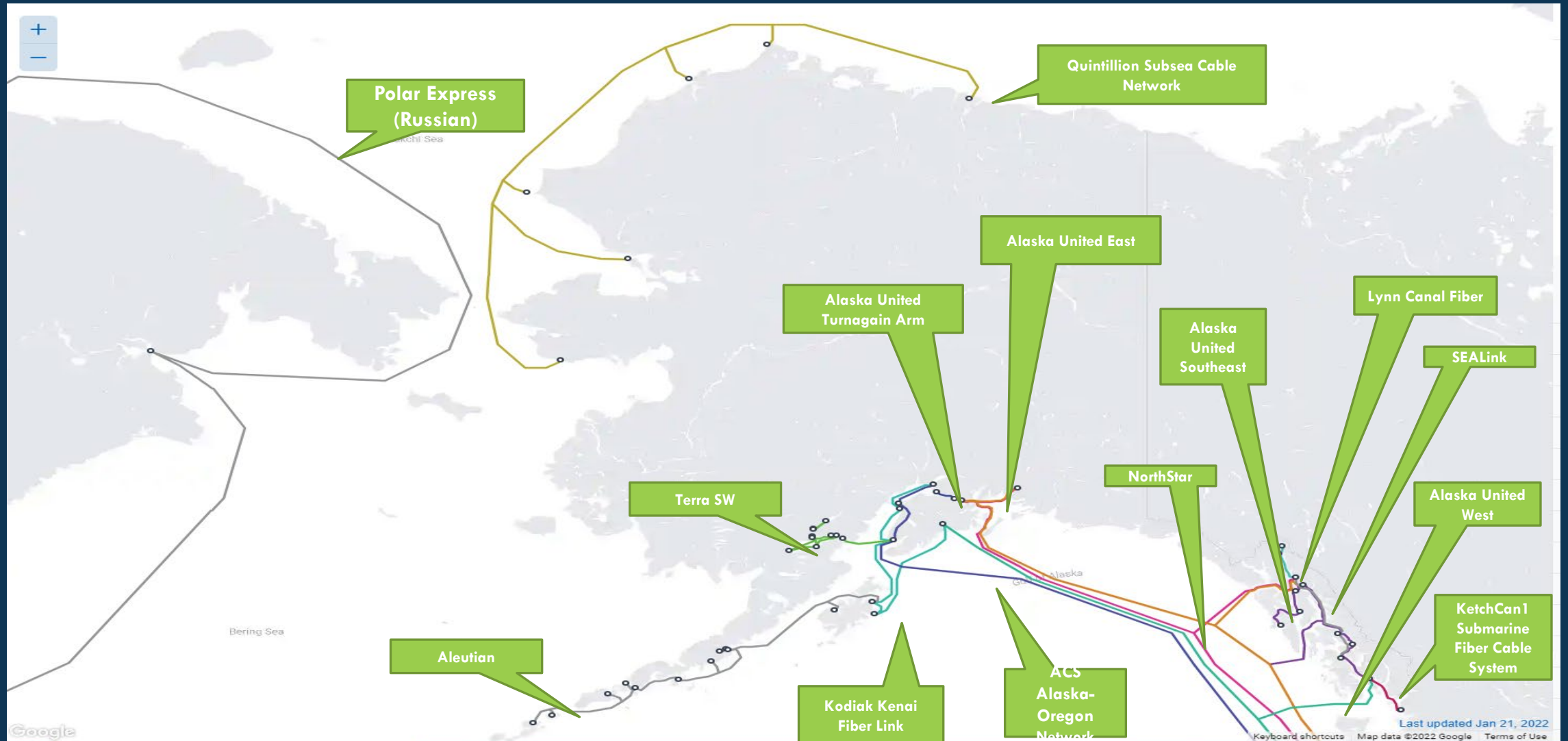
THE *LIFELINE* SECTORS

- COMMUNICATIONS
- ENERGY
- TRANSPORTATION
- WATER/WASTEWATER

Figure 1: Critical Infrastructure Sectors and Related Sector Risk Management Agencies



ALASKA- ALL CABLES



CASE STUDIES:

- Maersk Line Disrupted (2017): Intentional destruction, massive maritime impact
- SolarWinds Orion Breached (2020): Supply chain, ~18k systems
- Microsoft Exchange Server Breached (2021): 30k+ organizations
- Florida Water Treatment Attacked (2021): Attempt to poison water
- Purported Iran Cyber Files (2021): Fuel pumps, cargo ships (satellite comms, ballast systems)
- Port of Houston (2021): Attributed to “nation-state actor”, successfully defended
- Log4j (2021/22): Potential Operational Technology vulnerability
- Americold Storage (April, 2023): Food distribution throughout the Pacific Northwest
- Quintillion Cable Incident (June, 2023): Fiber optic cable damage leads to widespread outage

PORT OF KETCHIKAN CONT.



Ketchikan Marine Industry Council
 "Identify and Promote Ketchikan's Marine Enterprise"
 www.ketchikanmarineindustry.com

Ketchikan's Marine Industrial Core

Marine Facility	Owner/Operator	Depth at MLLW	Road Access	Other
Ward Cove Industrial Complex	Power Systems and Supplies of Alaska – 907-247-7772	28-41 ft	Roaded, Electricity	Floating log storage for 15m boardfeet, car float slip w marine rail, veneer barge loading dock, 55,000 barrel fuel oil storage tank, 200,000 gallon caustic soda storage tank, 5x 1,200 ton wood-chip storage silos
Panamax Cruise Ship Berths (4x)	City of Ketchikan – 907-247-3610	40-100 ft	Roaded, Electricity	
George Inlet Marine Complex	Cape Fox Corporation – 907-225-5163	60-120 ft	Roaded, 3-Phase El.	Navigation routes suitable for VLCC-class vessels, discrete location, proximity to potential dedicated power source.
Ketchikan Shipyard	Vigor Industrial – 907-617-4726	35 ft	Roaded, Electricity	460' x 110' drydock, 225'x85' drydock, 25,500 sf ship assembly/repair berth, 70,000 sf assembly hall, 3 mobile cranes
City Float (Casey Moran Harbor)	City of Ketchikan – 907-247-3610	40-100 ft	Roaded, Electricity	Downtown location within walking distance of many amenities.
Bar Harbor	City of Ketchikan – 907-247-3610	8-60 ft	Roaded, Electricity	
Saxman Seaport	City of Saxman -907-225-4166	30 ft	Roaded, 3-Phase El.	125 ton transfer bridge, marine rail, 30,000 sf warehouse.
Ward Cove Cannery	Boyer Towing – 907-225-2090	35 ft	Roaded, 3-Phase El.	Warehousing, hoist, marine hotel / accommodations.
Pacific Log and Lumber Gravina Mill Site	Ketchikan Gateway Borough –907-228-6625	30 ft	Roaded, Electricity	2 acres paved storage, 5 acres unpaved storage
Smart Construction	Smart Construction – 907-225-5520	4 ft	NA	Steel grid for 100-300 ft barges.
Air Marine Harbor	Air Marine Harbor – 907-225-2282	15-60 ft	Roaded	Offices, storage, 300-ton marine rail, 5-ton air rail.
Talbot's Building Supply Dock	Talbot's Building Supply – 907-225-6671	35 ft	Roaded	
Southeast Stevedoring	Southeast Stevedoring – 907-225-6157		Roaded	Uplands storage, crane, bulkhead, barge landing.

What infrastructure dependencies exist?

What are the IT/OT risks?

Fuel Vendor	Contact	Depth MLLW	Road Access	Features
Petro Marine	907-225-1985	15-65 ft	Roaded	Hydraulic crane, 10.4m fuel storage capacity, fuel, lubricants, public showers, batteries, chemicals, tanks, containers spill response
Anderes Oil	907-225-2163	30 ft	Roaded	Delivery of 200 gallons / minute, lubricants, batteries, filters, chemicals
Amerigas	907-225-4000	20 ft	Roaded	

Barge Line	Contact	Depth MLLW
Alaska Marine Lines	1-800-585-6102	35ft
Northland Services	907-225-2093	60ft
Olson Marine	907-225-1417	
Boyer Towing	907-225-2090	

Additional Advantages:
 -- Mature supply chain: 212 marine sector businesses
 -- Ketchikan International Airport (90 minute flight to Seattle),
 -- Ketchikan General Hospital (regional medical hub),
 -- Lowest electrical rates in Alaska
 -- Reliable barge service
 -- Low tax rates
 -- Pro-industry community

CG CYBER PROTECTION TEAM (CPT)



- Operated by Coast Guard Cyber Command
- Available to all MTS Stakeholders at no cost to requestor
- Prevention Missions:
 - Assess- identify vulnerabilities and weakness before exploitation (Pen Testing and Configuration Review)
 - Harden- guidance and recommendations to secure and protect MTS networks
 - Assessment reports have helped to support PS Grant requests
- Response Missions:
 - Hunt: identify adversary on MTS networks
 - Clear: advise on restoring port system functionality and operations post-incident

Requesting CPT Engagement: maritimecyber@uscg.mil

THANK YOU!



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