

# Austal's Electrowatch Awarded ONR Contract for Additive Manufacturing Process

CHARLOTTESVILLE, Va. – The U.S. Navy Office of Naval Research (ONR) has awarded ElectraWatch, an Austal USA company, a highly competitive Manufacturing Science Program contract to identify new material processing pathways that use additive manufacturing for Copper-Nickel (CuNi) heat exchanger designs. ElectraWatch was one of only five organizations, and the only non-academic organization, to receive a contract award.

“I’m proud of the hard work our engineering team has done to make this contract award possible,” ElectraWatch General Manager Ryan Dunn said. “We are honored that this award puts us in a position to further champion the next generation of manufacturing capabilities and to best equip the Sailors who protect and support our country and our allies.”

Dr. Scott Kasen, ElectraWatch’s principal engineer, explained that the enormous heat loads of future naval vessels require advanced designs for seawater heat exchangers which may only be achievable by leveraging the design freedom afforded by Additive Manufacturing (AM). “Despite the tremendous advancements in AM,” Kasen said, “existing modalities are unable to easily process CuNi alloys which are chosen for their high thermal conductivity, demonstrated corrosion performance, and biofouling resistance in marine environments.”

To overcome the challenges of existing approaches, ElectraWatch partnered with Metallum3D to propose a novel AM capability which uses the unique combination of a bound pellet extrusion process and microwave sintering.

This project reinforces Austal USA's position as a global leader in advanced ship manufacturing and sustainment. Investing in these future capabilities demonstrates the commitment of Austal USA and ElectraWatch to continue expanding post-delivery support and sustainment offerings, while also supporting multiple shipbuilders, maintenance providers, and the U.S. Navy across a broad range of military ships deployed in the U.S. fleet.

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## **Thales Expands its ALFS Repair Capabilities in the United States**



The sonar dipping transducer of an MH-60R Seahawk, attached to the "Saberhawks" of Helicopter Maritime Strike Squadron (HSM) 77, assigned to the Ticonderoga-class guided-missile cruiser USS Shiloh (CG 67) is hoisted during an subsurface detection exercise. *U.S. NAVY / Mass Communication Specialist 1st Class Rawad Madanat*

CLARKSBURG, Md. – Thales Defense & Security Inc. has serviced more than 1,300 Airborne Low Frequency Sonar (ALFS) subsystems over the past eight years, a key milestone in the primary sustainment activities for ALFS, the company announced Oct. 28.

For more than 20 years, Thales Defense & Security Inc. has been the primary sustainment service provider for ALFS, demonstrating a continued commitment to onshore maintenance in the United States.

Thales, a leader in antisubmarine warfare (ASW) systems,

continues to support the U.S. Navy and various countries eligible for Foreign Military Sales program via production, maintenance, and logistics support of the ALFS.

For more than 20 years the U.S. Navy has deployed the ALFS system which is based on the FLASH (Folding Light Acoustic System for Helicopters) dipping sonar family of products.

Onboard the U.S. Navy and other navies' ASW MH-60R helicopters, the ALFS anti-submarine warfare system is capable of detecting and classifying submarines.

Thales Defense & Security Inc. is increasing its U.S. based sustainment capabilities by bringing additional repair operations onshore to further increase the throughput of repairs already performed in the U.S. These new processes bring a majority of the repairs closer to the Navy providing shorter turnaround times that enhance readiness. Additionally, this will enable the development of new skills and create more U.S. jobs.

This further supports the recent contract Thales signed with Lockheed Martin RMS for additional ALFS system deliveries and for continued sustainment support under Seahawk Performance-Based Logistics.

"We are very proud to expand our domestic U.S. support to the U.S. Navy for the ALFS systems," said Mike Sheehan, president and CEO, Thales Defense & Security, Inc. "It is a decisive advantage to be closer to our customer and reaffirm our commitments to providing U.S. based capabilities."

"Thanks to this new achievement, Thales strongly raises its ability to support the U.S. Navy from the USA whilst providing the best of breed antisubmarine warfare operational systems and technology for the benefit of the U.S. Navy," said Gwendoline Blandin-Roger, managing director, underwater systems.

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# Cutter Kimball Returns to Homeport after Patrol in Bering Sea and Arctic



The crew of the Coast Guard Cutter Kimball (WMSL 756) underway in the Pacific, April 4, 2021. *U.S. COAST GUARD*

JUNEAU, Alaska – The crew of Coast Guard Cutter Kimball returned to homeport in Honolulu, Hawaii Oct. 27 following a 66-day patrol in the Bering and Chukchi Seas, the Coast Guard 14<sup>th</sup> District said in a release.

The crew traveled nearly 13,000 nautical miles since departing Honolulu Aug. 21, including through the Bering Strait and into the Arctic Ocean. With Arctic sea ice melting, these distant travels are important in helping the U.S. Coast Guard conduct a range of operations in the high latitudes as fish stocks and maritime traffic moves north.

The Kimball crew conducted 18 targeted living marine resources boardings; the most a national security cutter has completed during a single patrol in the 17th District area of responsibility.

“These law enforcement boardings maximized our presence in the Bering Sea,” said Petty Officer 1st Class Samuel Cintron, Kimball lead law enforcement petty officer. “Each boarding team member was instrumental to the success of the operation and reinforced the Coast Guard’s position on protecting national security and domestic fisheries.”

More than 65 percent of fish caught in the United States is harvested from Alaskan waters, generating more than \$13.9

billion annually.

The Kimball crew conducted at-sea drills with key maritime partners including the Royal Canadian Naval Ship Harry DeWolf and Japanese Maritime Self-Defense Force training vessel Kashima. In each instance, the ships operated alongside one another and exchanged visual communications, followed by honors. This display of maritime cooperation and mutual respect emphasizes the United States', Canada's, and Japan's continued commitment to one another and to partnership at sea.

During the deployment, Kimball crew observed four ships from the People's Liberation Army Navy (PLAN) operating as close as 46 miles off the Aleutian Island coast. While the PLAN ships were within the U.S. exclusive economic zone, they followed international laws and norms and at no point entered U.S. territorial waters. All interactions between the Kimball and PLAN were in accordance with international standards set forth in the Western Pacific Naval Symposium's Code for Unplanned Encounters at Sea and Convention on the International Regulations for Preventing Collisions at Sea.

The Kimball crew conducted astern refueling at sea with Coast Guard Cutter Oliver Berry, a fast response cutter also homeported in Honolulu. This capability significantly extends the operational range of FRCs.

Commissioned in 2019, Kimball is the Coast Guard's seventh national security cutter. These assets are 418 feet long, 54 feet wide and have a displacement of 4,600 long tons. With a range of 13,000 nautical miles, the advanced technologies of this class are designed to support the national objective to maintain the security of America's maritime boundaries and provide long range search and rescue capabilities.

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# Future USS Fort Lauderdale Completes Builder's Trials



The future USS Fort Lauderdale (LPD 28) was successfully launched at the Huntington Ingalls Industries (HII) Ingalls Division shipyard in Pascagoula, Mississippi, on March 28.

*HUNTINGTON INGALLS INDUSTRIES*

WASHINGTON – The future USS Fort Lauderdale (LPD 28), the Navy's 12th San Antonio class-amphibious transport dock ship, conducted builder's sea trials Oct. 26, Team Ships Public Affairs said Oct. 27.

Builder's trials consist of a series of in-port and at-sea demonstrations that allow the Navy and the shipbuilder, Huntington Ingalls Industries' (HII) Ingalls Shipbuilding Division, to assess the ship's systems and readiness prior to acceptance trials and delivery to the Navy.

"The completion of builder's trials is a great first step in ensuring operational readiness of the vessel and the capabilities it will soon bring to the fleet," said Capt. Scot Searles, San Antonio Class Program Office, program manager, Program Executive Office (PEO) Ships. "The collaboration between the Navy and our industry partners ensures that we'll have a capable and ready ship for our Sailors."

The San Antonio-class is designed to support embarking, transporting, and landing Marines and their equipment by conventional or air-cushioned landing craft. The ship's capabilities are further enhanced by its flight deck and hangar, enabling the ship to operate a variety of Marine Corps helicopters and the MV-22 Osprey tiltrotor aircraft. Because

of the ships inherent capabilities, they are able to support a variety of amphibious assault, special operations, expeditionary warfare, or disaster relief missions, operating independently or as part of Amphibious Readiness Groups, Expeditionary Strike Groups or Joint Task Forces.

HII's Ingalls Shipbuilding Division is currently in production of the future USS Richard S. McCool (LPD 29) and the future USS Harrisburg (LPD 30). LPD 28 and 29 will serve as transition ships to LPD 30, the first LPD 17 Flight II ship.

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## **NAVCENT Task Force Completes First Unmanned Integration Exercise at Sea**



On Oct. 26, U.S. Naval Forces Central Command completed exercise New Horizon, the first at-sea evolution for its new unmanned task force. *NAVCENT*

NAVAL SUPPORT ACTIVITY, Bahrain – U.S. Naval Forces Central Command (NAVCENT) completed exercise New Horizon, the first at-sea evolution for its new unmanned task force, the command's public affairs said Oct. 26.

During the two-day training exercise, Task Force 59 integrated and evaluated new MANTAS T-12 unmanned surface vessels (USV) that operated alongside manned U.S. patrol craft and Bahrain Defense Force maritime assets.

This marked the first time NAVCENT integrated USVs with manned assets at sea in the U.S. 5th Fleet area of operations. New Horizon was also the first time for NAVCENT's integration of

USVs with manned assets at sea alongside partner forces.

“Working with our regional partners on unmanned systems integration is crucial to enhancing collective maritime domain awareness,” said Vice Adm. Brad Cooper, commander of NAVCENT, U.S. 5th Fleet and Combined Maritime Forces. “Bahrain, as our first regional partner to collaborate with Task Force 59 during an at-sea exercise, demonstrates the strengthening of our strategic relationship.”

The first phase of New Horizon, conducted Oct. 20, featured operators controlling the USVs aboard patrol coastal ship USS Firebolt (PC 10), while the vessels conducted high-speed maneuvers in formation.

The final phase on Oct. 26 brought together a larger force of manned and unmanned maritime and aerial assets from NAVCENT, the Royal Bahrain Naval Force and Bahrain coast guard. Participating units also included patrol boat USCGC Maui (WPB 1304), an MH-60S helicopter, a V-BAT unmanned aerial vehicle and Bahrain naval force patrol craft.

Both U.S. and Bahraini forces practiced operating the vessels in formation to strengthen mutual understanding and interoperability.

“This is a significant milestone for our new task force as we accelerate the integration of unmanned systems and artificial intelligence into complex, cross-domain operations at sea,” said Capt. Michael Brasseur, commander of Task Force 59. “Real-world evaluation is essential.”

NAVCENT established the task force Sept. 9 to focus U.S. 5th Fleet efforts on unmanned systems and artificial intelligence integration.

The U.S. 5th Fleet area of operations encompasses about 2.5 million square miles of water area and includes the Arabian Gulf, Gulf of Oman, Red Sea and parts of the Indian Ocean. The

expanse is comprised of 21 countries and includes three critical choke points at the Strait of Hormuz, the Suez Canal and the Strait of Bab al Mandeb at the southern tip of Yemen.

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## **CORAS to Support U.S. Navy's Shipboard Systems with AI/ML**



TYSONS, Va. – CORAS, an enterprise decision management software company in Tysons, Virginia, has won a prototype project agreement under the other transaction authority with the U.S. Navy's Naval Information Warfare Center Atlantic for the Information Warfare Research Project (IWRP).

The focus of the prototype is to improve and troubleshoot shipboard information technology systems. As part of this effort, CORAS will leverage artificial intelligence and natural language processing software from Plasticity Inc. Other transaction authority refers to the authority of the Department of Defense to carry out certain prototypes, research, and production projects.

The combined efforts of the IWRP team, Advanced Technology International, the manager of the IWRP consortium, and CORAS staff were critical in the speed of awarding the PPA.

CORAS President Dan Naselius said, "We are excited to expand CORAS' footprint within the U.S. Navy. Implementing Plasticity's superior AI/NLP capabilities within CORAS' FedRAMP High Cloud security will help the Navy leverage data and root cause analysis to run tactical systems expediently and efficiently, and simultaneously gather and identify more information."

Alexander Sands, Plasticity cofounder, said, “Natural language processing is driving even deeper insights from data to power government and commercial decision-making. We’re excited to integrate Plasticity into CORAS’ OTA effort to bring secure, state-of-the-art NLP to a tactical DoD environment.”

Plasticity provides NLP and machine learning software to companies across a variety of industries including government, finance, commerce, and healthcare. Plasticity’s software is used by more than 200 companies for semantic language understanding, question answering, and entity extraction, as well as in machine learning pipelines.

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## **U.S. Navy Destroyer Detaches from U.K. Carrier Strike Group**



After nearly 13 months of training alongside the United Kingdom’s Carrier Strike Group 21, USS The Sullivans (DDG 68) detached from the Strike Group in the Arabian Sea Oct. 19. *THIRD MARINE AIRCRAFT WING / 1st Lt. Zachary Bodner*

LONDON – The USS The Sullivans, an Arleigh Burke-class destroyer, has departed the U.K. Carrier Strike Group after a five-month contribution to the global deployment, the U.K. Ministry of Defence said Oct. 26.

Having worked with the Carrier Strike Group (CSG) for the last 13 months, USS The Sullivans has departed from the group after seven months deployed alongside Royal Navy vessels.

The destroyer and its 280-strong crew have made a significant

contribution, both in the pre-deployment exercising off the coast of Scotland last spring and throughout the CSG's deployment since May.

USS The Sullivans played a key role in numerous exercises from the Atlantic to the Pacific Ocean and back, including countries like Japan, Republic of Korea and Singapore, as well as NATO. Such exercises develop interoperability between militaries, enhancing regional stability and security.

"The Sullivans' ship's motto says everything about the special relationship between the U.K. and U.S. navies: 'We stick together,'" said Minister for the Armed Forces James Heapey. "I'd like to thank all of her ship's company for their outstanding contribution to the Carrier Strike Group deployment."

Commissioned in 1997 and named after the five Sullivans brothers who tragically lost their lives when their ship was sunk in World War II, USS The Sullivans is one of the escort ships providing air defense to aircraft carrier HMS Queen Elizabeth during its inaugural global deployment.

"USS The Sullivans have been tremendous representatives of the United States during Carrier Strike Group 21," said Brig. Gen. Simon Doran, U.S. senior national representative for the CSG. "From the North Sea to the South China Sea, from supporting combat operations in Operation Inherent Resolve to more than a dozen exercises with foreign Navies, the sailors on The Sullivans embodied their ship's namesake – we stick together."

In a tangible demonstration of the United Kingdom's closest defense and security relationship, U.S. involvement in this deployment has significantly contributed to development of the UK carrier strike capability. In June, the UK CSG operated alongside French carrier Charles De Gaulle in a landmark moment for NATO.

“I am immensely proud of every Sailor on The Sullivans for consistently providing an integrated multi-domain capability to Carrier Strike Group 21 in support of HMS Queen Elizabeth’s maiden deployment,” said Cmdr. James R. Diefenderfer Jr., commanding officer of USS The Sullivans. “We gained a tremendous amount of respect for our CSG21 counterparts as we sailed together across the globe demonstrating our shared commitment to uphold freedom of navigation of our seas, and it was impressive to be a part of their seamless integration with many other allies and partners along the way.”

“We could not have operated as well as we did without the genuine support of Commodore Moorhouse, Brig. Gen. Doran, and the ship’s crews and squadron personnel that made up CSG21,” the CO said. “Everyone was exceedingly welcoming every step of the way, and all were true partners in every theatre of operation going all the way back to our first operation together in the North Sea in the fall of 2020.”

The CSG has covered over 40,000 nautical miles through the Mediterranean, Indian Ocean and Philippine Sea. The main body of the group is currently visiting India in a powerful demonstration of the U.K.-India Comprehensive Strategic Partnership.

USS The Sullivans will return to national tasking in the Mediterranean and Atlantic Ocean over the coming weeks.

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## **PEO Ships Establishes New Program Office to Focus on**

# U.S. Navy and Foreign Military Sales, Boats & Craft



Sailors aboard expeditionary sea base USS Lewis B. Puller (ESB 3) throw a line to Sailors aboard a Mark VI patrol boat attached to Commander, Task Force 56, during refuel training in the Arabian Gulf, July 27. *U.S. NAVY / Mass Communication Specialist 2nd Class Dawson Roth*

WASHINGTON – Program Executive Office (PEO) Ships stood up their newest program office, U.S. Navy and Foreign Military Sales (FMS) Boats and Craft (PMS 300), with a small ceremony Oct 21., said Team Ships public affairs.

PMS 300 was established to ensure programmatic resources are aligned to efficiently and effectively deliver capability to requirements after the current Support Ships, Boats and Craft Program Office (PMS 325) portfolio had grown significantly.

“The creation of this program has further empowered this hard-working team to get things done,” said the PMS 300 program manager, Capt. Eric Felder, “I’m looking forward to working alongside this talented team of acquisition professionals as we navigate the growth of this new program to ensure collaboration and readiness with our domestic and allied partners remains strong.”

PMS 300 will be responsible for commercial-based naval acquisition of craft and boats for the Navy, other Department of Defense and non-DoD customers. There will be three product line divisions, including Foreign Military Sales, Boats and Combatant Craft and Service Craft & Seaborne Targets, which will support all aspects of planning, budgeting, acquisition and life cycle management for boats and craft. Additionally, there will be two support divisions: Business and Financial Management and Integrated Logistics Support.

PMS 325 will be renamed the Auxiliary and Special Mission Shipbuilding Program Office and will oversee auxiliary ships and special mission ships including the T-AO 205, NGLS, T-ARC(X), T-ATS, T-AGS, NOAA NAV, and T-AGOS(X) class programs.

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## UMS Skeldar's V-200 Completes Successful Flight Trials in Finland



The Skeldar V-200, completing flight demonstrations aboard Finland's OPV Turva. *UMS SKELDAR*

BASEL, Switzerland – UMS Skeldar's V-200 unmanned helicopter has successfully completed five-day long surveillance flight trial demonstrations aboard the OPV Turva as part of the Valvonta2 project led by the Finnish Border Guard and funded by the European Maritime and Fisheries Fund, the company said in a release.

The project aims to achieve an understanding of how authorities could use unmanned aircraft for diverse and demanding operations at sea both now and in future scenarios.

As part of the trials, UMS Skeldar's V-200 completed multiple operational flights and successfully demonstrated a range of features including automatic takeoff and landing (ATOL) capabilities, vessel identification at different ranges and altitudes, search and rescue during day and night, Automatic Identification System and transponder demonstrations. To perform the missions, the Skeldar V-200 was simultaneously carrying a multiple sensor suite of AIS, Wescam MX-8 electro-

optical and infrared sensors as well as the high-capacity Leonardo Pico-SAR synthetic aperture radar.

“These flight trials demonstrate that the Skeldar V-200 platform is the perfect fully-developed ATOL choice for maritime missions,” said Stefan Hyltberg, program manager for UMS Skeldar. “Its adeptness at operating from a range of naval ships using market-leading heavy-fuel Hirth Engines in combination with its multiple sensor carrying capability give the Skeldar V-200 a real advantage over its competitors. Our team is proud to have its work recognized by the Finnish Border Guard.”

The platform of choice for maritime-based missions worldwide, the V-200 has been previously selected by the German, Royal Canadian, Belgian and Royal Netherlands navies, providing embedded “eye in the sky” intelligence, surveillance, and reconnaissance capabilities to enhance its capacity to perform primary and secondary missions.

“As we have proven with these trials, the Skeldar V-200 continues to provide best-in-class capabilities for customers,” Hyltberg said “Continuous development of our Skeldar V-200 and V-150 aims to not only validate the platforms’ capabilities but also analyze customer requirements with a view to increasing the service suite UMS Skeldar provides.”

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## **U.S. Navy, JMSDF Conduct Bilateral Operations in South**

# China Sea



U.K. Royal Navy aircraft carrier HMS Queen Elizabeth (R08), U.S. Navy Nimitz-class aircraft carrier USS Carl Vinson (CVN 70), and Japan Maritime Self-Defense Force Izumo-class helicopter destroyer JS Kaga (DDH 184) sail together as part of Maritime Partnership Exercise (MPX) 2021, Oct. 17, 2021. *U.S. NAVY / Mass Communication Specialist 3rd Class Erin C. Zorich*

SOUTH CHINA SEA – The Carl Vinson Carrier Strike Group and JS Kaga (DDH 184) are conducting maritime security operations and exercises, Lt. Cmdr. Miranda Williams, USS Carl Vinson, said in an Oct. 25 release.

Japan Maritime Self-Defense Force Izumo-class helicopter destroyer JS Kaga (DDH 184) and U.S. Navy Carrier Strike Group (CSG) 1 are conducting bilateral operations in the South China Sea for the first time since Vinson Carrier Strike Group (VINCSG) deployed this summer.

While in the South China Sea, Japan and U.S. Navy units are conducting maritime security operations, to include flight operations, coordinated tactical training between surface and air units, refueling-at-sea evolutions and maritime strike exercises.

Cooperative maritime engagements and U.S. carrier operations in the South China Sea are part of the U.S. Navy's routine presence in the Indo-Pacific.

“Bilateral operations are one key component in our collective maritime readiness,” said Rear Adm. Dan Martin, commander, CSG 1. “The Indo-Pacific is a dynamic region and by continuing to conduct routine operations with our allies and partners throughout international waters and airspace, we demonstrate our unwavering commitment to upholding international law, on

the sea and in the air, and to ensuring that all nations can do the same without fear or contest.”

Since arriving in the U.S. 7th Fleet region, CSG 1 units have participated in multiple operations and exercises with JMSDF units, most recently MALABAR 2021 and Maritime Partnership Exercise. JMSDF Rear Adm. IKEUCHI Izuru, Commanding Officer of IPD21 force, Commander of Escort Flotilla 3 said maritime alliances and partnerships are vital to maritime security and underpin the free flow of commerce and access to resources in the region.

“Through a series of large-scale exercises, the JMSDF was able to enhance its tactical capabilities as well as strengthen its cooperative relationship with the navies of participating countries,” said Rear Adm. IKEUCHI Izuru, Commanding Officer of IPD21 force, Commander of Escort Flotilla 3. “Our activities in the South China Sea and Indian Ocean, which are important international maritime traffic routes, together with the navies of our allies and partners who share our fundamental values and strategic interests, demonstrate our unity and strong will to realize a “free and open Indo-Pacific” based on law.”

Led by Carrier Strike Group (CSG) 1, U.S. Navy units operating in the SCS include aircraft carrier USS Carl Vinson (CVN 70); Ticonderoga-class guided-missile cruiser USS Lake Champlain (CG 57) and USS Shiloh (CG 67); Arleigh Burke-class guided-missile destroyer USS Stockdale (DDG 106) of Destroyer Squadron (DESRON) 1; and nine squadrons of embarked Carrier Air Wing (CVW) 2.

CVW-2 consists of an F-35C squadron, the “Argonauts” of Strike Fighter Squadron (VFA) 147; three F/A-18E/F Super Hornet squadrons, the “Bounty Hunters” of VFA-2, the “Stingers” of VFA-113, and the “Golden Dragons” of VFA-192; the “Gauntlets” of Electronic Attack Squadron (VAQ) 136, operating the EA-18G

Growler; the "Black Eagles" of Airborne Command and Control Squadron (VAW) 113, operating the E-2D Advanced Hawkeye; the "Titans" of Fleet Logistics Multi-Mission Squadron (VRM) 30, operating the CMV-22B Osprey; the "Black Knights" of Helicopter Sea Combat Squadron (HSC) 4, operating the MH-60S Seahawk; and the "Blue Hawks" of Helicopter Maritime Strike Squadron (HSM) 78, operating the MH-60R Seahawk.

This marks the second time that a carrier strike group is operating in the South China Sea with the advanced capabilities of the F-35C Lightning II and Navy CMV-22B Osprey.

CSG 1 is deployed to the U.S. 7th Fleet area of operations in support of a free and open Indo-Pacific region.