



A I S - P A C

Using Vessel Tracking Data to Prioritize Bathymetric Surveying in a Rapidly Changing Arctic

AIS-PAC created products to improve maritime domain awareness and support decision-making concerning vessel traffic and vessel safety in a rapidly changing Arctic environment. For example, AIS-PAC can identify marine vessel risk areas, such as those with outdated bathymetry or insufficient coastal detail for safe passage of vessel traffic. Methods to reduce execution times required for ahandling and analyzing exceptionally large collections of Automated Information System (AIS) vessel tracking data were developed, which enabled the investigating team to develop AIS-derived data products. AIS-PAC has transitioned and is currently hosted by the Alaska Ocean Observing System.

This research project supplies critical data related to vessel tracking and bathymetric information.

The project team created products to improve maritime domain awareness and support decision-making concerning vessel traffic and vessel safety in a rapidly changing Arctic environment. The capability to reduce execution time required for handling and analyzing exceptionally large collections of Automated Information System (AIS) vessel tracking data was developed, which enabled the investigating team to develop AIS-derived data products that identify marine vessel risk areas, such as those with outdated bathymetry or insufficient coastal detail for safe passage of vessel traffic. Using and optimizing a high-capacity, parallel compute workflow resolved data volume processing challenges and the streamlined workflow delivered valuable summaries of vessel density patterns across multiple vessel types, environments, and locations.

