



ADMIRALTY GAM Service

The UK Hydrographic Office has been investing into the use of AI and machine learning to tackle the increasing levels of bathymetric data cleansing and verification tasks.

The combination of our data science expertise and leading experts in the field of bathymetry has led to the development of a new tool, the ADMIRALTY GAM Service, which streamlines the bathymetric data cleansing process.

The ADMIRALTY GAM Service uses AI and machine learning to identify sonar noise within bathymetric data sets. The service provides the same levels of certainty and accuracy achieved through human identification, while significantly reducing the amount of effort and time spent on this process. This allows your experts to invest the freed time and resource in analysing and adding value to your data.

The UK Hydrographic Office, working with Teledyne CARIS, has been able to bring this new service directly to your workflow, creating a seamless user experience.

What is it

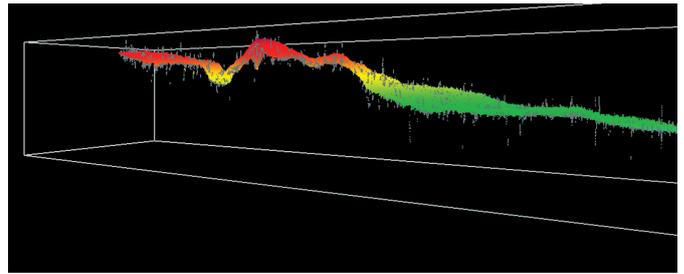
The ADMIRALTY GAM Service classifies sonar noise using an enhanced Generalised Additive Model (GAM). This model works through your point cloud data adapting to identify noise within your data set.

The model is a cloud-based algorithm which is securely accessed directly from the CARIS HIPS and SIPS or CARIS Onboard software. The algorithm assigns soundings within your point cloud as noise. These soundings can then be rejected whilst running the ADMIRALTY GAM Service or can be reviewed in the Subset Editor for further evaluation.

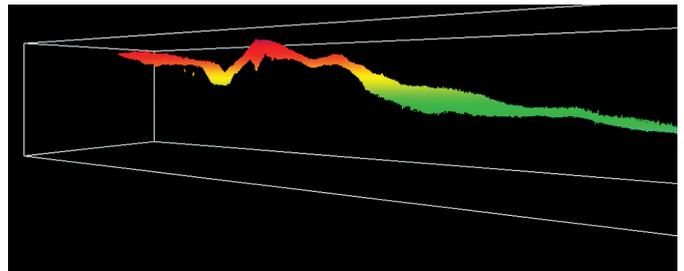
For the best results always use the right tool. The ADMIRALTY GAM Service has been especially tailored to work with single track multi-beam sonar data such as that collected on a research cruise or voyage.

Example Use

Cleansed data set with noise shown in grey

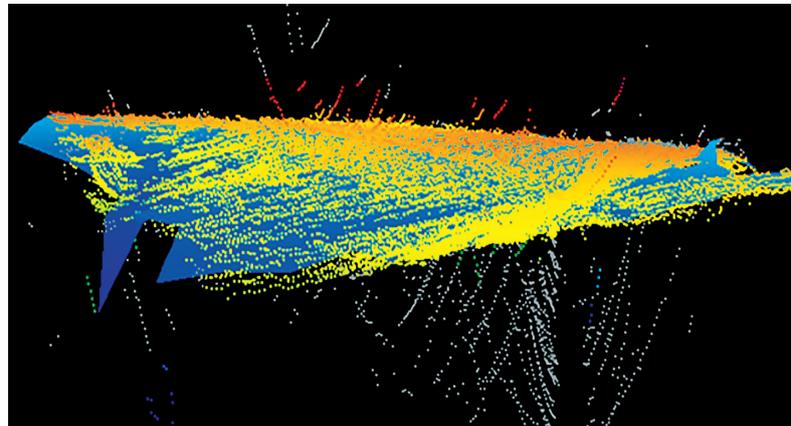


Cleansed data set with noise removed



A recent trial conducted on a data set gathered during a two day, 900km voyage in the Southern Ocean showed that the ADMIRALTY GAM Service algorithm took one hour and 30 minutes to identify the noise in a data set of marine depth data ranging from 100m to 3000m and had a physical size of 234MB. This task would typically require a trained expert to spend more than one day to manually identify the noise. This demonstrates the significant savings which can be achieved using the ADMIRALTY GAM Service.

Sonar noise identified by the ADMIRALTY GAM Service algorithm



UK Hydrographic Office

Admiralty Way, Taunton, Somerset
TA1 2DN, United Kingdom
Telephone +44 (0)1823 484444
customerservices@ukho.gov.uk
gov.uk/ukho

Find out more about our market-leading
ADMIRALTY Maritime Data Solutions:

admiralty.co.uk    

ADMIRALTY and  are trademarks of the Secretary of State for Defence

21.10.V01.EN © Crown Copyright 2021. All rights reserved. Correct at the time of publishing.

How to buy

The ADMIRALTY GAM Service can be purchased directly through the Teledyne CARIS platform for users with an existing HIPS and SIPS licence.

Users can choose to purchase access to the ADMIRALTY GAM Service on a yearly, or month by month subscription basis for a customized software solution to meet your processing needs.