



SPAWAR
Systems Center
San Diego

Backscatter Imagery/Mosaicing

The Backscatter Imagery/Mosaicing Software Package developed by SSC San Diego is designed to perform two main tasks: bottom characterization and object identification.

Bottom characterization classifies bottom sediment type by analyzing backscatter intensity levels from multi-beam sonar systems. The package contains a sophisticated mathematical model of sonar interaction to calculate the bottom sediment type or mix. The model uses the acoustic characteristics of the sediment and its scattering properties to classify the ocean bottom.

Using images obtained by multi-beam sonar systems, object identification provides specific information about detected objects.



BACKSCATTER IMAGERY/MOSAICING PACKAGE

- Filters intensity images with a smoothing filter to remove shot noise and bad beams
- Segments ocean bottom areas into regions of similar backscatter strengths and textures
- Uses either single ping or mosaiced swath image computations
- Can be used with either low- or high-frequency sonar systems
- Is capable of identifying many object and sediment types such as boulders, rocks, pebbles, gravel, sand/gravel, coarse sand, silt/sand, silt, silt/clay, and mud/ooze
- Estimates bottom roughness by using multi-segment array processing and correlation techniques

For additional information, contact:

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This technology may be the subject of one or more invention disclosures assignable to the U.S. Government.

Licensing inquiries may be directed to

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