



OPTECH REA

Rapid Environment Assessment



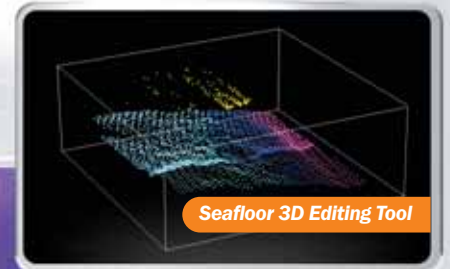
Seamless Topo/Bathy Reflectance Image



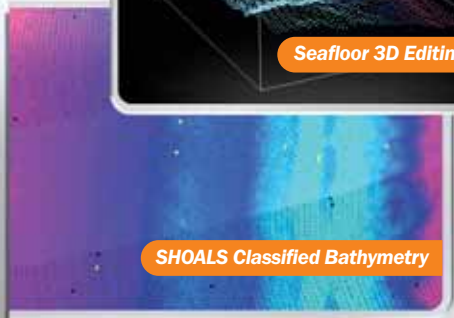
SHOALS Seafloor Reflectance



SHOALS Seafloor Classification



Seafloor 3D Editing Tool



SHOALS Classified Bathymetry

REA

The only image processing software to provide coastal environmental information by fusing airborne lidar and hyperspectral data

Lidar Products

- Seamless topo/bathy images
- Sea-surface reflectance images
- Water attenuation images
- Water column volume images
- Seafloor reflectance images
- Shoreline vectors

Lidar/Hyperspectral Fusion Products

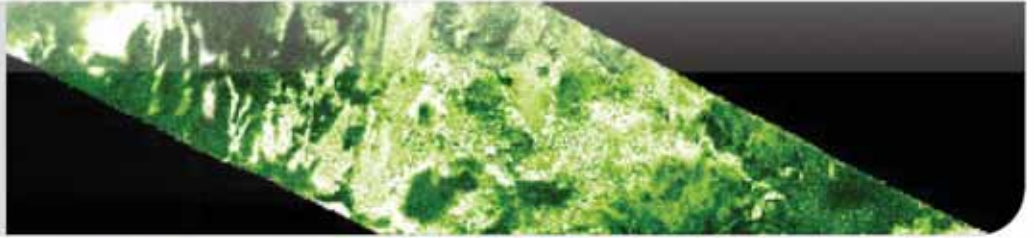
- Water-leaving reflectance images
- Seafloor reflectance images
- Chlorophyll concentration images
- CDOM concentration images
- Suspended sediments images
- Sand/grass weight images
- Seafloor/land-cover classification

3D Visualizations

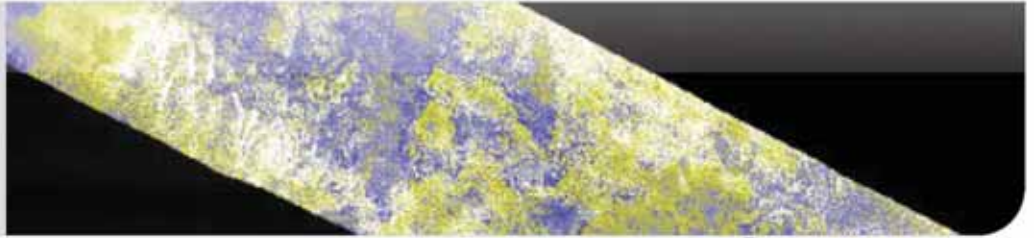
- 3D volumetric viewer of water column
- 3D autostereo view



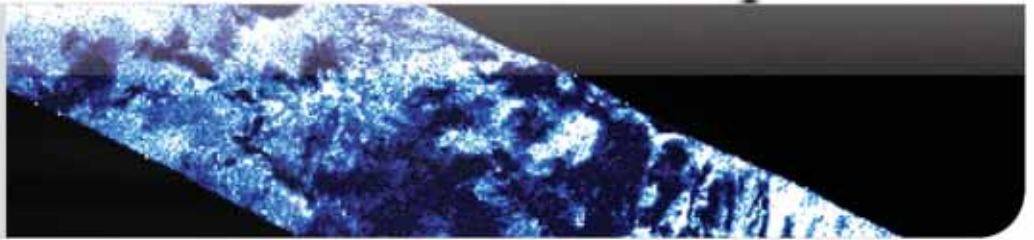
**Chlorophyll
Concentration
Image**



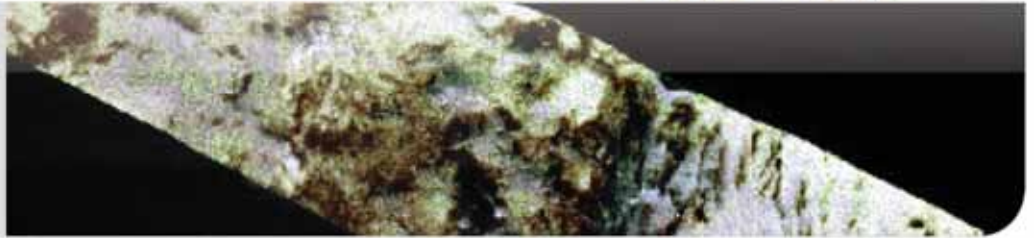
**CDOM
Concentration
Image**
*Colored dissolved
organic matter*



**Sand Endmember
Image**



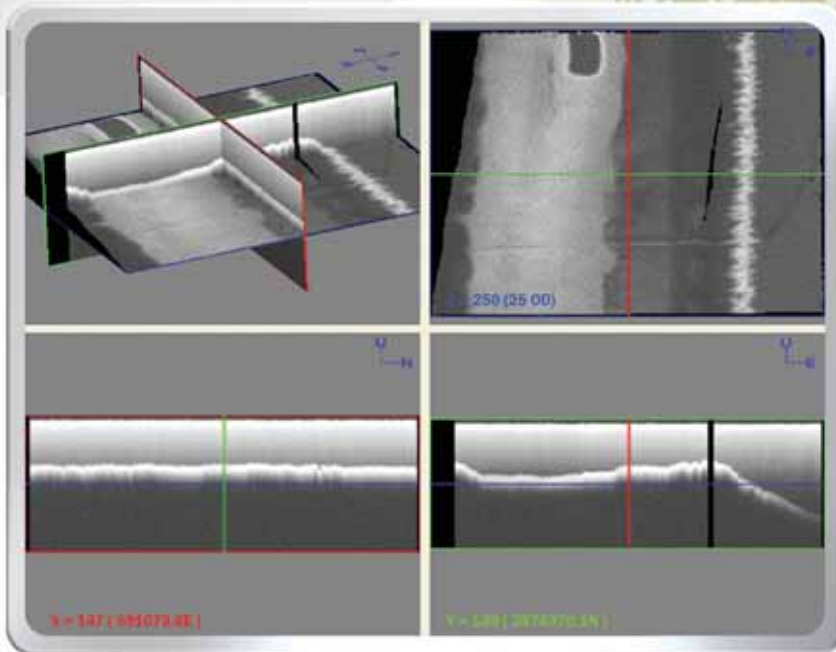
**Seafloor Spectral
Reflectance
Image**



**Fusion-Based Seafloor
Classification**



Data gathered by SHOALS system



**3D Water
Volume Slice
Viewer**