# Wavenology EL-IMG

Acoustic and elastic waves are widely used in biomedical and geophysical subsurface imaging, as well as ultrasound nondestructive testing and evaluation. In such applications, acoustic or elastic waves interact with targets and their complex environments. The aim of acoustic and elastic wave imaging is to utilize the collected wideband acoustic/elastic wave signals to arrive at high-resolution images of targets. Wavenology EL-IMG is a physics based imaging software tool with a graphic user interface to obtain high-resolution acoustic and elastic wave images from wideband signals, such as those collected by medical and structural ultrasound transducers, seismic sensors, and sonar sensors. By using full-wave acoustic and elastic wave solvers, Wavenology EL-IMG can accurately account for the multiple scattering effects of the environment and targets, thus obtaining high resolution in its images. With the Wavenology EL-IMG graphic user interface, the user can design a best measurement configuration to image the targets of interest. Both synthetic and measured wideband sonar, ultrasound and seismic data can be directly utilized by the Wavenology EL-IMG package.
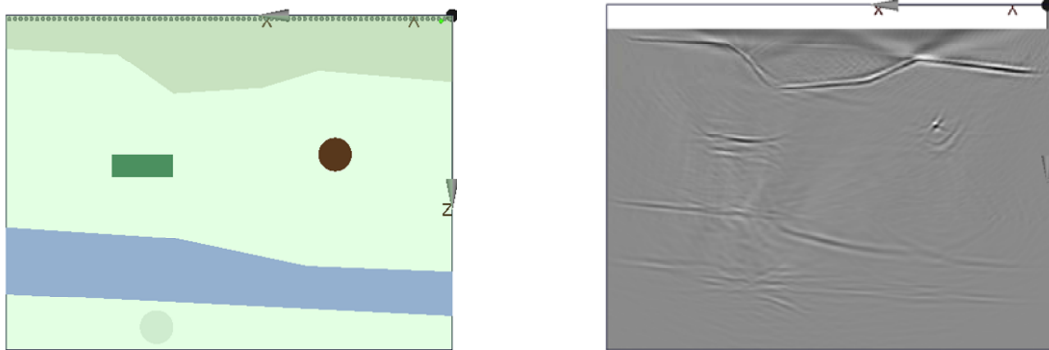
Seismic Imagining of Subsurface Targets
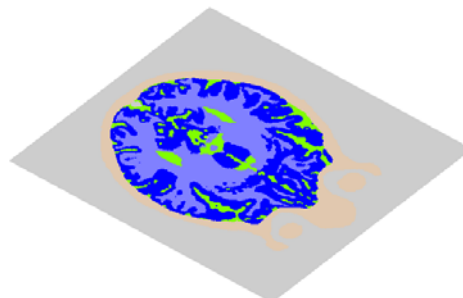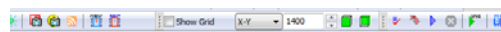
Biomedical Ultrasound Imaging of human head