
Subject: NOAA Tech award

Posted by [David.Chevrier](#) on Fri, 07 Nov 2003 20:40:05 GMT

[View Forum Message](#) <> [Reply to Message](#)

Hi,

Just thought IDL lovers might like to know that several AVI's I created entirely in IDL just won 'Best Data Visualization in Research' at this year's NOAA Tech conference and expo. This event is a large NOAA (National Oceanic and Atmospheric Administration) wide meeting that occurs every other year at its headquarters in Washington DC. It's a chance for any of NOAA's many organizations to show off their latest and greatest tech achievements in high-end computing, network and web technologies, 3/4d applications, virtual reality, GIS, data modeling, collaborative computing and more.
<http://www.noaatech2004.noaa.gov>

The movies I made were from several of my IDL programs dealing with underwater acoustics. Typically acoustical data are displayed as 2d 'echograms' - vertical dimension through the water column, and time along the horizontal axis. These are not suitable for viewing the data in a geographical context. I developed 3d visualizations of multi-frequency acoustical survey data to view the data in geographical space from small to large spatial scales. Acoustical data are commonly used to provide relative indices of species-specific abundance and biomass. In order to scale the relative indices to absolute estimates, we must incorporate a measure of the echo amplitude from an individual fish. I also developed 3d visualizations of the fish body and airbladder from x-ray and ct images. These images are used in theoretical models to improve prediction of acoustical scattering over a wide range of frequencies and fish orientations. The two main AVIs were: one of my 3d echogram program with bathymetry and one from my fish ct imaging program. In the ct program, I extracted two 3d meshes from the images; one of the skin and one of the airbladder inside (the part that actually reflects sound.) We can now view the air bladder and determine exactly how sound bounces off of it and its exact volume and surface area.

I just wanted to thank all the regular contributors to this newsgroup. I go here everyday and have learned a lot from you guys!
-dave chevrier