

SECTOR:
HI-TECH

OFFERINGS:
CUSTOM SOFTWARE
DEVELOPMENT

TECHNOLOGY:
FLUID DYNAMICS
SOFTWARE DEVELOPMENT

SOFTWARE DEVELOPMENT FOR VISUALIZATION OF OCEAN RELATED METEOROLOGICAL DATA

Our customer is a premier R&D organization in the country. They specialize in R&D of high-performance computing (HPC) and associated software development. They were involved in the developing a software for numerical weather modelling and forecasting using high performance computing infrastructure. The customer wanted to develop a visualization module for graphically displaying the simulation results using industry standards.

Zeus Numerix approached this problem by using basic visualization techniques to display the weather data. The techniques were modified to suit the requirement of import and processing of large meshes. Mesh plots and sectional views were used to display mesh structure generated and vector glyphs. The sections allowed the customer to display colour plots and contours. The software incorporated capability to render elevation maps, iso-surfaces and streamlines. The software displays the weather data as a 3D rendered visual map. Further, navigational features to pan, rotate, preset views, latitude, longitude, altitude and temporal positional views allows the user better control while viewing the 3D rendered output.

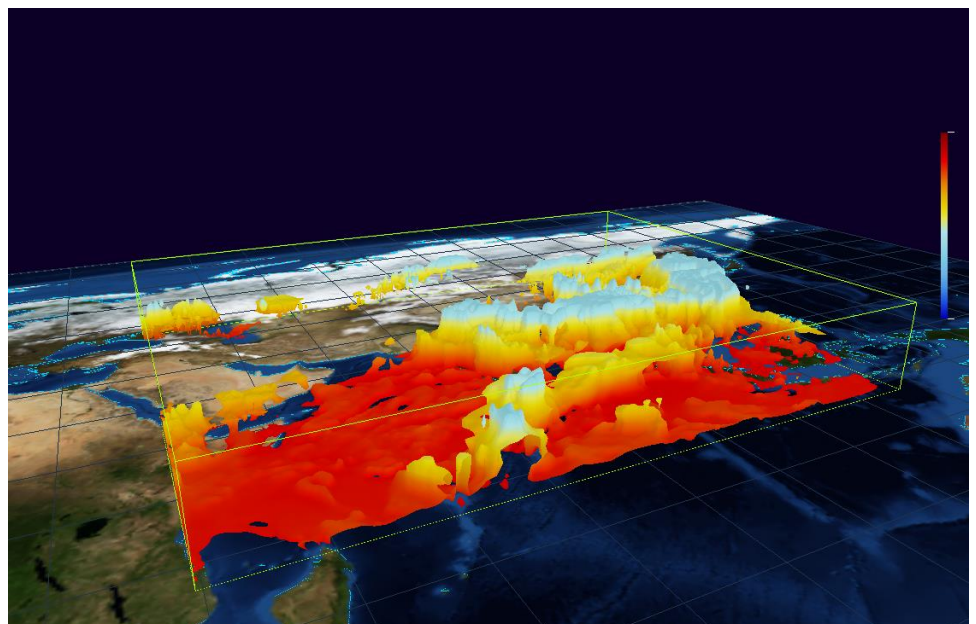


Figure 1: Metrological Data in Indian Ocean Region

The customer was delivered with the software incorporating all the features as required. A GUI was developed such that even a layman can use the software effectively with the help of a user manual. The software was validated against sample data sets provided by the customer.