



Earth System Research Laboratory (ESRL)

Global Systems Division (GSD)

Putting tools in the hands of users

TerraViz™ - Data Visualization System



What is TerraViz™?

We believe that to have an impact on society, data should be easy to find, access, visualize, and understand. Built using game engine technology, **TerraViz™** is designed to facilitate this process by visualizing information from the past, present, and future.

Designed for a world where everything is in motion, TerraViz™ allows fluid interaction across time and space, providing a tool for exploring the National Oceanic and Atmospheric Administration's (NOAA) vast collection of information.

How Does It work?

Video games are a multi-billion dollar industry, and represent an ideal choice for providing a wealth and diversity of data to a user in real time.

The industry harnesses the power of graphics card technology (GPUs) available in commodity PCs to render and display information in efficient ways. Utilizing this technology, TerraViz™ can run on many platforms – desktops, browsers, and eventually mobile devices.

esrl.noaa.gov/gsd/
esrl.noaa.gov/neis/



Search across vast collections of information



One million GPU-based particles trace a wind pattern from a single time step and pressure level modeled from FIM



Mashup data from diverse sources



Exploring the ocean floor

New Strategies for Collaboration



1) The first speaker is recorded by a web camera. Behind her is the second speaker as seen through viewport "A." 2) A virtual world created from data that is added as a layer in front of the speakers. 3) The second speaker is recorded by a web camera. Behind him is the first speaker as seen through viewport "B."

Interoperability of Diverse Data

There is a great deal of diversity and interrelation in data between the physical, chemical, biological, and social domains. TerraViz™ provides capabilities to quickly integrate and interact with data from diverse sources regardless of format or location.

Overview Video:

<http://esrl.noaa.gov/neis/library/terraviz-video.html>

Contact

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Time series of Hurricane Sandy captured by the GOES-13.