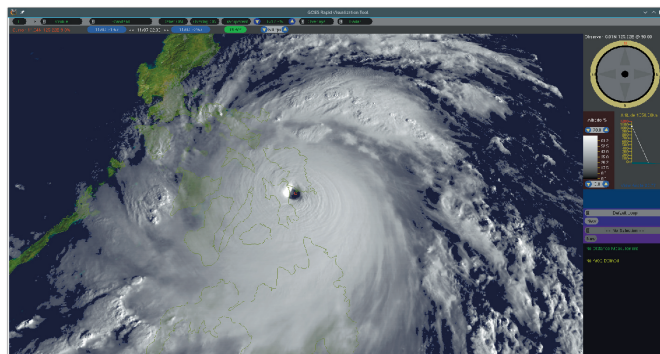


Rapid Visualization Tool

Data Visualization Software

Automated Sciences LLC

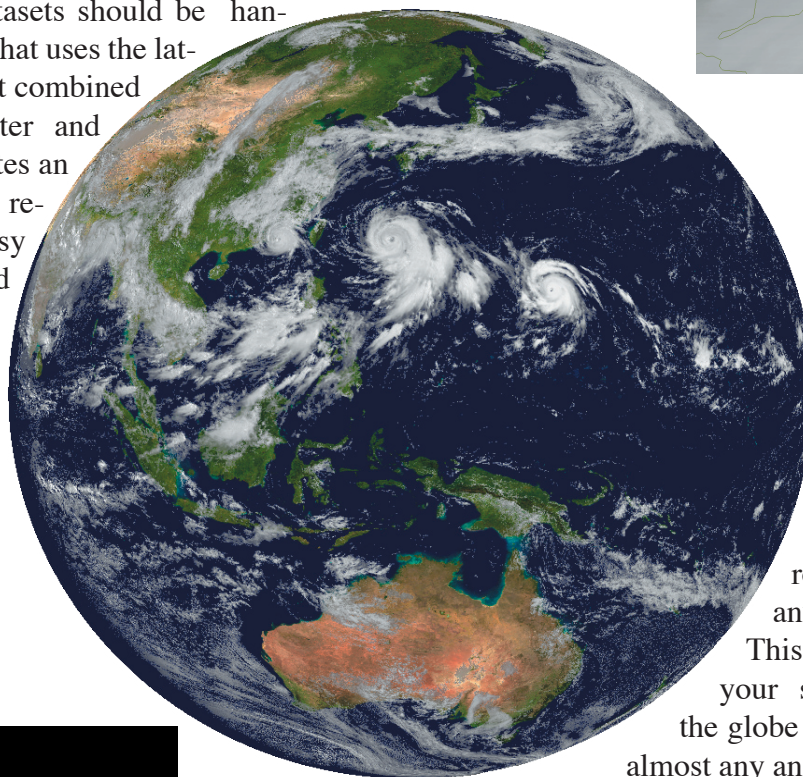
December 2015



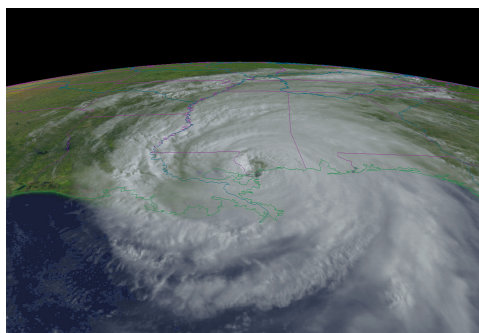
RVT showing Typhoon Yolonda

The Automated Sciences Rapid Visualization Tool (RVT) is a dynamic 21st century way to visualize the data from GOES Satellites. The GOES satellites provide large amounts of data in a short time frame that usually require real-time analysis. Visualization is the key to proper and timely interpretation and understanding of the data.

In creating the RVT we threw away traditional ideas of how large complex datasets should be handled and created a tool that uses the latest 3D technologies that combined with powerful computer and graphics hardware creates an innovative, powerful, realistic, flexible, and easy to use visualization and analysis tool.



Hurricane Katrina 2005



Automated Sciences LLC

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The RVT is based on the concept of allowing the user to view the earth and the collected meteorological data surrounding it from almost any perspective in space. This means you can position your spaceship anywhere on the globe and view the Earth from almost any angle or direction. You can

rapidly move around and change viewing parameters and the scene will instantly update. This ability allows the scientist or meteorologist to more easily observe many types of events and provides a much greater opportunity to spot events that may otherwise be missed.

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The Rapid Visualization Tool is a 64 bit application that fully exploits 64 bit CPU and memory features.

The RVT also performs a range of automatic multispectral analysis to create a number of valuable meteorological products from the available satellite data. This speeds the meteorological analysis of the satellite data.

Rapid Visualization Tool Key Features	
Ability to view the data from any perspective	You can place yourself (the observer) anywhere in space surrounding the Earth to view the data. You can be at any elevation above 50km and look at the scene from almost any angle.
Intuitive on-screen Navigation	A range of unique and powerful navigation controls allow the user to easily and quickly navigate around.
Simplified visualization selection	Allows the user to quickly choose the desired spectral channel, choose a suitable enhancement, and activate various options. Users can create and there own enhancements.
Automatic Loading and Animation	The RVT will always load the most recent data and you can easily animate the past days data beneath your observation location.
Solar Zenith Angle Correction	Ordinarily visible channel data is only usable for part of the day and is inconsistent in brightness and contrast. By normalizing the data based on the sun angle the visible channel data is usable and consistent for most of the day.
Cloud Height Relief	The RVT uses cloud height information that can be derived from infrared channel data to map and display the cloud height relief in the visible channel.
Fly Through Mode	Allows you to plot a path over the Earth and fly that path over a dataset!
Product Generation Facility	Allows you to instantly generate image or video products of what you are viewing for use on the internet or by the media. Automatic user definable product generation is also available as an option.
Evtensive Overlays	Overlay coast-line and borders, Cities, or user defined features and boundaries. Available options allow for NWP, flight tracks, and radar data overlays contact us for details.
Automatic Analysis	It will automatically analyze the satellite data to estimate convective system rainfall, measure sea surface temperatures, show cloud heights, calculate cloud motion vectors (upper level winds) using infared and water vapor data, determine likely areas of fog, and detect covective development. We also have a package available that adds automatic tropical storm tracking and intensity evaluation. The Automatic Analysis is continually being upgraded and improved. Additional algorithms Contact us for more details.

Technology

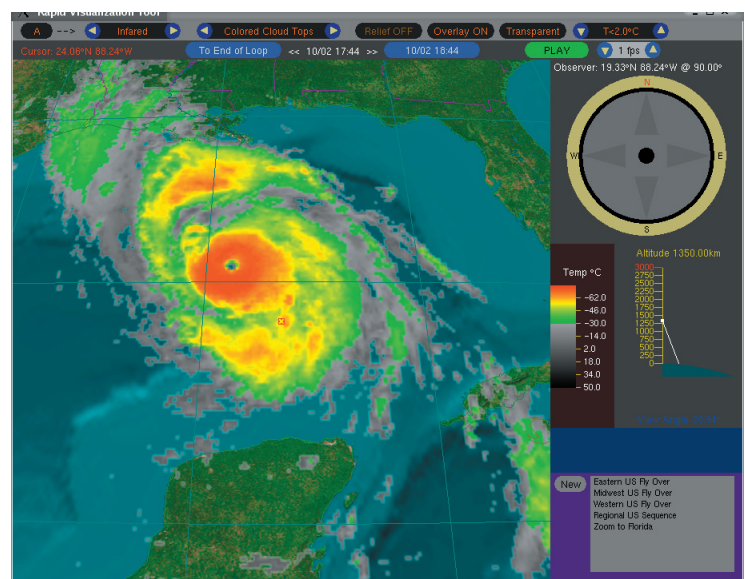
The Rapid Visualization Tool takes advantage of the latest processor and 3D graphics accelerator technologies to provide a highly interactive and realistic experience. It uses the same technologies that drive the latest video games and feature films. As these technologies continue to evolve we will take advantage of the improvements.

Availability

The Rapid Visualization Tool described is avaiable now. It requires special hardware as a result is is exclusively included with the RVT WorkStation which is equipped with the hardware needed to run this.

Rapid Visualization Tool Workstation

The Rapid Visualization Tool Workstation (RVT Workstation) includes the RVT Software described here and is designed to be connected via a local area network connection to either the GOES Box or POES Box to retrieve real-time satellite data. Multiple RVT Workstation's can be used providing simultaneous real-time visualization capability to multiple users. Contact us for pricing and availability.



The RVT with a color enhanced infrared image