

Finding Diamonds in the Rough

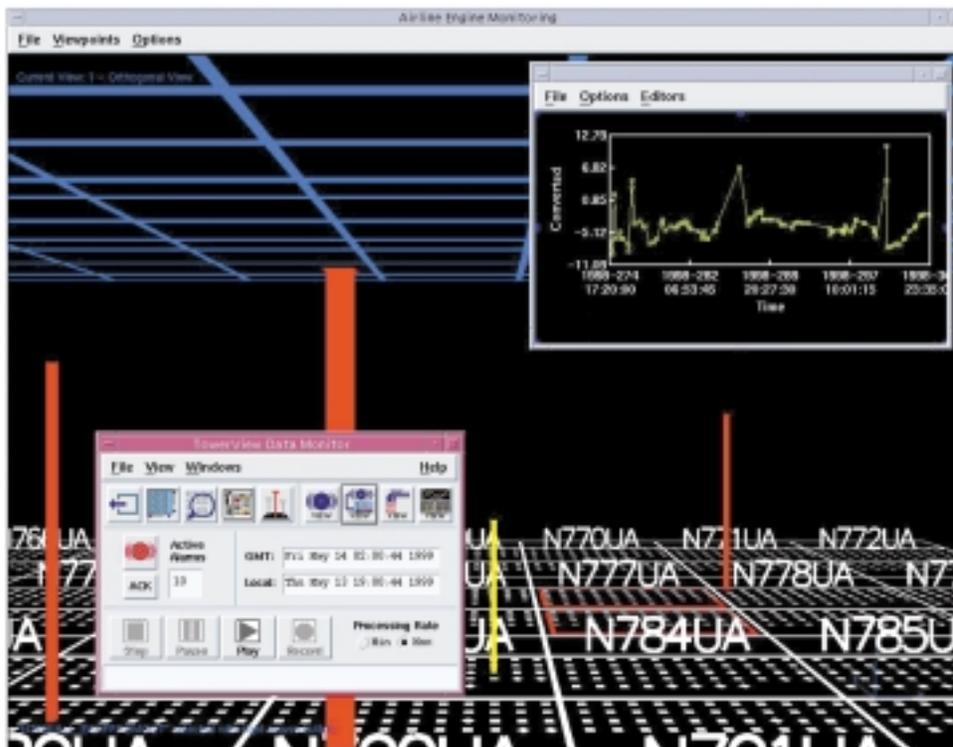
Sorting through massive quantities of data to find meaningful information from space is no easy task. NASA needed just the right tool for that kind of undertaking. HighTower Software, Inc., of Irvine, California, now markets TowerView,[®] a product based on technology that was originally developed for monitoring transmissions from NASA's unmanned spacecraft.

The company's founders developed this technology at NASA's Jet Propulsion Laboratory (JPL), and early versions of the product still support NASA's Voyager, Galileo, and Cassini missions. NASA's first successful deployment of real-time monitoring and analysis technology was TowerView's predecessor, MARVEL, which has been in continuous real-time use since Voyager's encounter with Neptune in 1989.

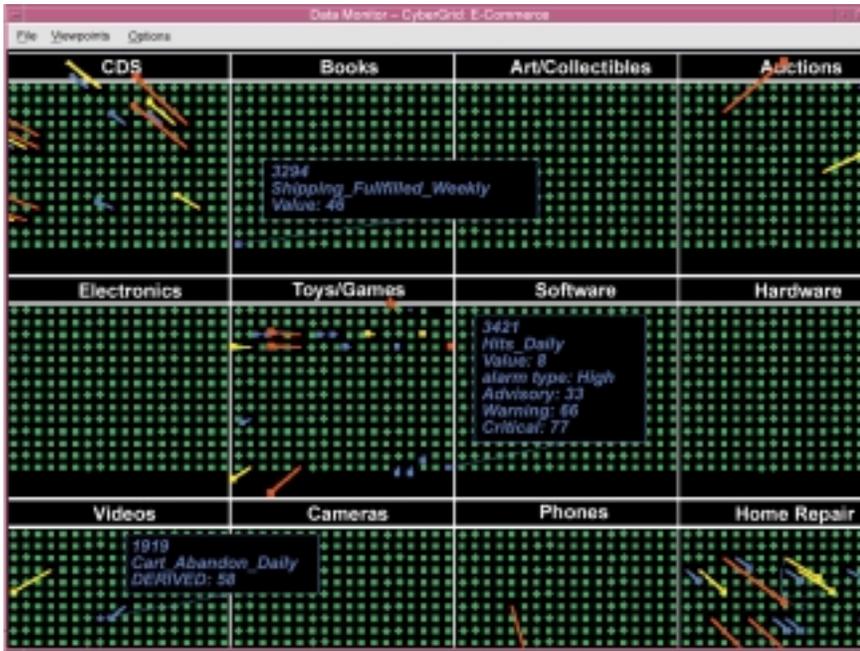
The inventors of this visual data discovery technology are offering an integrated suite of software tools with underlying analysis capabilities and represented visually within the CyberGrid,[®] a three-dimensional display. The CyberGrid is

designed to help users see, at a glance, critical information buried in massive quantities of data by highlighting data that is unusual. Unusual data are represented by towers on the CyberGrid and the height of the towers is proportional to how unusual a particular piece of data is. It also allows users to set trend alarms, which are triggered by fluctuations in data over time. These alarms are displayed as flashing objects in the CyberGrid, giving users the opportunity to focus on essential information and respond instantly. The CyberGrid integrates thousands of potentially diverse measurements into one display.

The CyberGrid was developed in response to cognitive research, which has demonstrated that humans are not able to hold more than seven (plus or minus two) information "chunks." Graphs can pull numbers together into a "picture" that can be held in a single chunk of short-term memory, while tables tend to overwhelm the observer's ability to absorb pertinent information. CyberGrid takes the



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TowerView® offers solutions spanning a range of e-business infrastructure applications

traditional graph a step further by adding a third dimension, permitting an even larger amount of information to enter the single picture.

This data snapshot can be a very useful tool during clinical trials, such as aiding in expediting Food and Drug Administration (FDA) drug approval. TowerView’s visual analysis capabilities can significantly reduce the time it takes to close a trial for FDA approval. A large clinical research organization used TowerView to evaluate safety of a new AIDS treatment. Clinicians managing the trials needed immediate access to data that indicate unusual trends, anomalous information, and a means of analyzing different values, such as a continuous decrease in platelet and white cell counts over the course of a patient’s visits for monitoring in the trial. Furthermore, the sooner drugs critical to the treatment of very ill patients come to market, the earlier these drugs can begin saving lives.

Other industries, such as e-commerce, can benefit from TowerView’s rapid information analysis capabilities. TowerView enables the user to monitor and analyze important data, such as web

page traffic statistics, inventory records from data warehouses, and critical marketing information—integrating all of it into a single real-time view.

According to the company: “The evolution of this technology first at JPL and more recently at HighTower, has led to a highly sophisticated and widely applicable product that can be easily and inexpensively installed, maintained, and modified.”

This technology can clearly offer the user an entirely new way of sifting through mounds of data to find crucial information.

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