



## UNREEL AND NVIDIA® QUADRO® HELP BOOST FINANCIAL NEWS TV NET WORTH

UNREEL  
CASE STUDY

Savvy investors increasingly rely on TV networks for real-time business and financial information to help them manage and drive their portfolios. To vie for these high-end viewers, news and information programs pull out all the stops to make their presentations more vivid, dynamic, and engaging, so viewers can absorb and interpret the significance beneath the facts and figures.

To achieve their goals of visually stimulating and valuable presentations, broadcasters are taking advantage of 3D graphics, HD video, and other innovative technologies designed to add punch to their programs. TV networks are merging data, education, opinion, and entertainment in ways designed to profit both their viewers and their own bottom lines.

UNREEL (formerly Brainstorm America), an innovator and supplier of real-time 3D production graphics and virtual-set integrated solutions, helps TV networks take news and data presentation to new levels. Drawing on its deep technical and production history and expertise, UNREEL offers complete packages of hardware, software, and services that it calls the UNREEL eXperience. Powered by NVIDIA Quadro technology, UNREEL's technology is helping a leading financial and business news network enter the world of talent-driven, immersive graphics – and to deliver valuable real-time information for immediate consumption and use by its sophisticated, financially aware viewers.

“The Quadro-powered UNREEL tools let networks tell today's complex and data-driven stories, especially in business news, in ways that are imperative for their highly educated, high-net-worth viewers,” explains Paul Lacombe, CEO of UNREEL. “Their audience needs up-to-the minute information presented in a way they can digest and apply immediately.”

### Combining video, data, and live presentations

Making complex information both comprehensible and captivating is a perpetual challenge for TV news programs. UNREEL's major business/financial TV network customer applies the technology as both an enormous video wall more than 10 meters wide and interactive graphics that are projected into space and controlled by presenters' hand motions. The network studio's fully immersive 3D environment, part real and part virtual, breaks new ground in TV news presentation.



Image courtesy of UNREEL

Propelling the UNREEL systems is the Quadro 6000, a professional-class graphics processing unit (GPU) that integrates high-performance computing capabilities with advanced visualization techniques and delivers an incredible 1.3 billion triangles per second. The Quadro 6000 – which UNREEL's business/financial TV network customer was the first to put into production – enables the extreme speed, precision, and reliability required to push the amount of data surging through the system in real time. The huge video wall's data is updated in real-time as cameras zoom back and forth between long-distance and close-up data views.

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Viewed from a distance, the giant wall can graphically show large-scale trends, such as real-time changes in stock prices of multiple companies (e.g., a particular market segment, or all the companies included in an entire stock exchange) or trend patterns for a large geographic area, as graphically compelling “heat maps.” Viewed up close, individual units – particular company stock tickers – are shown in detail. On-air presenters look at the wall and react to what’s happening, discovering the information at the same time as the viewers.

The wall also is able to show multiple videos simultaneously, each in a different section of the wall. The size of the video sections can be changed at will, through commands issued by either the on-air presenter or the show’s production staff. A catalog of sophisticated news templates is populated and deployed as needed in conjunction with the video content to tell the presenter’s financial or business news stories as effectively as possible.

The same UNREEL customer uses interactive virtual graphics in an otherwise real set to transform complicated data into an ultra-modern, visually compelling form that is easy for viewers to comprehend quickly. With a wave of the hand, an on-air presenter calls up 3D charts and graphs that appear to hover in mid-air. Another wave of the hand extends or highlights a particular portion of the graph, or sends it away to be replaced by another. UNREEL’s advanced motion-capture technology, powered by NVIDIA’s graphics solutions, enables these sophisticated virtual-real hybrid sets.

Taken together, this immersive real-time mix of video, data, and live presentation is allowing the network’s highly intelligent and well-educated viewers to go deeper into the financial and business content than ever before possible.



## Blurring the lines between real and virtual

The TV network’s video wall sits physically in the studio. The interactive graphics projected into the space represent virtual elements. The two realms of real and virtual coexist happily and reinforce one another, providing viewers with a TV-watching experience that is both fresh and valuable.

Implementing both the real and virtual aspects of the network’s studio requires the movement of massive amounts of data, video, and graphics through the NVIDIA-powered UNREEL system. The Quadro technology’s inherently low latency means that everything happens in real time, with no delays in, for instance, conversations between in-studio and remote talent, or an on-air presenter’s hand gestures and the movement of space-projected 3D graphics.

Adding virtual sets to the studio helps the network save on production costs, as well. Real sets, comprised of large physical structures and integrated infrastructure, cost money to move and change. Virtual sets, on the other hand, enable the talent to appear anywhere in relation to any number of surrounding environments – all of which can be changed or moved around at will.

As a result, the price to deliver highly dynamic and more effective presentations to audiences decreases with increased performance, thanks to the Quadro-enabled UNREEL systems, which power both the video and the virtual sets.

## Scalable technology suits multiple applications

For UNREEL, one of the most useful aspects of the NVIDIA technology is its scalability. The same fundamental technology able to power 10-meter video walls and live talent-interactive graphics on TV can also be applied to applications such as feature film production or portable HD systems for corporate presentations.

“UNREEL draws upon the complete Quadro product line to provide scalable solutions that are packaged and priced to match our clients’ requirements,” says Lacombe. “The quality of graphics possible with the Quadro cards is unequalled.”

Future plans for UNREEL and NVIDIA include the implementation of multiple graphics and SDI I/O boards in a single system for PGM/PGW formats; 3D stereo applications; and projects incorporating multiple displays and monitor walls.



To learn more about NVIDIA Quadro, go to [www.nvidia.com/quadro](http://www.nvidia.com/quadro)

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