

## Superman Returns soars across the big screen using the NVIDIA Quadro® FX 4500 SDI by PNY Technologies®



*Superman Returns*, the latest blockbuster from Warner Bros., captures the essence of the original DC Comic book - Superman. To achieve the rich imagery and comic book feel, *Superman Returns* was shot using Panavision's Genesis® Digital Camera System. The

unprecedented use of this camera for a major feature film meant that a new digital workflow needed to be established. Scott Anderson, visual effects and imaging supervisor for Digital Sandbox on *Superman Returns*, was responsible for not only establishing a real-time 2K digital pipeline but also for the color management and post production of the film. Anderson chose the NVIDIA Quadro® FX 4500 SDI by PNY Technologies® graphic board as a key component to the *Superman Returns* DI pipeline and digital workflow.

With over 20 years experience in visual effects, Scott Anderson, founder and president of Digital Sandbox, was no stranger to the idea of pushing technology beyond its conventional limits; he had already supervised visual effects on several box-office hits including *King Kong* and won an Academy Award as VFX supervisor for *Babe*. Anderson knew from experience that reliability and system stability would be critical if *Superman Returns* was going to come in on time and on budget. He decided to consult with Scott Leif whose company, Globalstor, has built a reputation in the industry for delivering fault-tolerant systems. The solution they chose included Globalstor's ExtremeStor-DI workstation with the NVIDIA Quadro FX 4500 SDI by PNY Technologies graphic board and ASSIMILATE's SCRATCH™ Data-Centric Workflow Solution as the backbone for the film's digital film-to-film workflow. This fully integrated, fault-tolerant high definition DI solution provided Anderson with an efficient and stable digital workflow that could handle all of the film's color requirements and numerous visual effects.

### Real-time 2K color correction

Color and image quality were crucial for bringing Superman to life on the big screen. Anderson and the Digital Sandbox team were able to use SCRATCH™ and the NVIDIA Quadro® FX 4500 SDI by PNY solution's real-time 2K color correction capability to give the director, Bryan

Singer, and the director of photography (DP), Newton "Tom" Sigel ASC, what they wanted: "The NVIDIA Quadro FX by PNY product line has really opened up this world of real-time color correction. Combined with ASSIMILATE's SCRATCH we are now able to perform very high end color work on a robust and affordable platform," said Scott Anderson.

Digital Sandbox was responsible for color continuity in all the aspects of post-production, which made efficiency especially important. *Superman Returns* was a particularly challenging case; with over 1400 effects distributed over 10 different FX houses. Everything had to be brought together and integrated while maintaining the visual continuity demanded by Sigel. "Using the NVIDIA Quadro® FX 4500 SDI by PNY also allowed us to preview our work in real time on larger format displays. This, combined with real-time laying back of color corrected material to tape, was a timesaver over other processes," said Anderson.



Real-time 2K playback allowed the film making team to give real-time feedback on the VFX team's creative choices; along with the portability of the ExtremeStor-DI solution this

proved to be extremely beneficial for Digital Sandbox. According to Anderson, "we were able to roll our systems in and co-locate or become embedded with the production. Now we were able to sit right between VFX, post production and editorial, right with the film making team. This gave us the ability to make the changes that the film making team wanted and, with the real-time capabilities of the SCRATCH™ and the NVIDIA Quadro®

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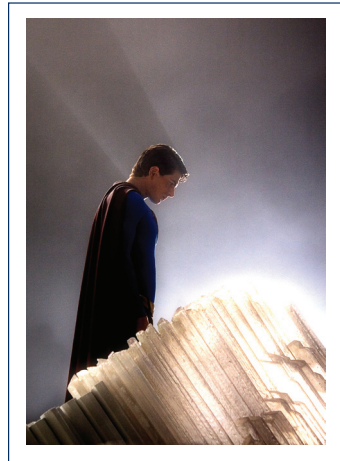
*Scott Anderson, Founder & President of Digital Sandbox*

"Superman Returns," continued.

FX 4500 SDI by PNY solution, we could review them instantly. I think that is really a breakthrough in the last few years with technology."

### Real-time client review

The NVIDIA Quadro® FX 4500 SDI by PNY graphic board made real-time client appraisal possible both in-house and at Hollywood DI where the VFX dailies were viewed. By using the HD-SDI output of the NVIDIA Quadro® FX 4500



SDI by PNY graphic board, Digital Sandbox was able to ensure that what the director, DP and members of the review team were seeing and approving on a daily basis was what the audience would see in the final production on the big screen: "We used the PNY 4500 SDI board to lay out color correction quickly and in real-time for client review. We would either lay

it back to HD-SR or review the files at Hollywood DI," said Anderson. Hollywood DI's Fairbanks Theater at The Lot is a state-of-the-art VFX screening suite complete with SCRATCH™, NVIDIA Quadro® FX 4500 SDI by PNY and a Barco 2k DLP projector. Anderson continued, "Because both Hollywood DI and our systems were set up using SCRATCH™ and the NVIDIA Quadro® FX 4500 SDI by PNY boards, we were easily able to tune the DI screening room at Hollywood DI to match the set up we had in-house."

### About Digital Sandbox

Digital Sandbox is a "new model" organization for visual effects, and digital cinema project management. Founded by accomplished visual effects supervisor, Scott Anderson ("King Kong", "Sky Captain and the World of Tomorrow", "Babe", "Hollow Man"), DSBX is intended to function as



an architecture firm for visual effects, postproduction and creative services. Digital Sandbox works with a production, managing the day-to-day tasks involved with an all data workflow across multiple vendors, vfx department, picture

editorial, and the studio to ensure the integrity of the filmmaker's vision. This high quality supervision addresses the emerging need for creative and technical focus while working across all budgets and schedules.

### About Globalstor Data

Widely recognized for its value-added services, including systems integration and customer support, Globalstor is an OEM with a full spectrum of hardware and software support offering a broad spectrum of broadcast and video professional solutions including DVD Digital Video Dailies solutions, 2K and 4K Digital Intermediate solutions, and high-performance hi-definition video servers offering scaleable storage up to 9.6TB. [www.globalstor.com](http://www.globalstor.com)

### About ASSIMILATE™

ASSIMILATE™ is transforming post production with its SCRATCH™ Data-Centric Workflow Solution, the essential mix for a resolution-independent data pipeline. Along with data management, SCRATCH™ features a rich set of DI and post tools for working in any combination of HD, SD, film (2K, 4K and beyond). ASSIMILATE™ is committed to empowering a broad spectrum of creative and post professionals with state-of-the-art, easy-to-use, data-centric solutions that deliver optimal price/performance. [www.assimilateinc.com](http://www.assimilateinc.com)



### ABOUT PNY TECHNOLOGIES, INC.

Established in 1985, PNY Technologies®, Inc. is a leading supplier and marketer of NVIDIA Quadro® by PNY professional graphics boards and Verto -brand consumer graphics cards. The company also offers a full line of memory upgrade modules, flash media, Attaché™ USB flash drives, flash peripherals. Headquartered in Parsippany, N.J., PNY maintains facilities in North America (Santa Clara and Orange County, CA, Miami, FL and Parsippany, N.J.), Europe (France, United Kingdom, Germany) and Asia (Taiwan).

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\* Photos courtesy of David James, courtesy of Warner Bros. Pictures