

Capture the Vision, Not Just the Image

Digital tools that help filmmakers
realize their creative vision.

Digital is the here and now.

All of the elements are now available, proven in the field, and ready to roll. Whether you are making top-end television, art house movies, or Hollywood blockbusters, you can do it digitally and do it better.

Why go digital? Because it unleashes a whole new set of creative freedom. It's a way of working that gives you—the director and cinematographer—new tools to add to your storytelling. It simply makes it easier for you to realize your vision and to extend the art of filmmaking.

But beware: not all digital systems are created equal. Some demand you make compromises on image quality. Others ask you to change the way you work on set. Digital systems that are not properly integrated lay time-consuming traps in the workflow.

The Grass Valley™ range of digital tools from Thomson offers the only fully integrated, end-to-end digital workflow. These tools let you choose the right production path for your project. Whether you want to capture your original footage on film or digitally—or even mix the two—the post-production workflow is identical; the end result is equally beautiful.

“The camera is beautiful, I think the picture quality is its own thing. It's not film, but it's not [HD] video.”

—David Fincher,
Award-winning
Director

The Grass Valley Viper FilmStream™ camera is the only uncompromised digital cinematography camera available today. Put simply, it works just like a film camera, without the film. And whether your project will shoot digital, film or both, the Viper camera supports a range of aesthetic choices. You may want to work in FilmStream's raw, uncompressed mode to provide unlimited options in post.

“What I like about the Viper is it sees colors, it sees things in a different way. ...People are reaching for more expressive ways to visualize and have emotional impact. That's what it all comes down to, the emotional impact with which we tell a story.”

—Michael Mann,
Award-winning Director/Producer

However, just as different film stocks suit a particular vision or budget, the Viper camera's three processed modes have helped filmmakers design the look and workflow best suited to their individual production. Decide in advance or adapt as you go, the Viper camera is flexible enough to move where the production takes you.

For those who shoot on film, the Grass Valley Spirit DataCine® has been the gateway to digital post for close to a decade. The Spirit system's world-standard performance was instrumental in ushering in the era of digital filmmaking. Now it is joined by the Grass Valley Spirit 4K for even higher resolution scanning to retain the beauty of your film.

Whether you shoot with film, or the Viper camera, or both, the heart of the digital post-production workflow is the Grass Valley Specter FS. This platform gives you the freedom to create the look you want with startling precision and guaranteed repeatability. Color timing is now so finely controlled it becomes a powerful element in your storytelling arsenal.

The Specter system communicates directly with other creative tools—including Grass Valley's own Spirit DataCine, Scream Grain Reduction, Shout Digital Restoration, and Phantom Transfer Engine products—so you see the whole project build up in front of you. Effects sequences drop effortlessly into place. The offline edit is compiled, at film resolution, instantly. You never have to work around rough cuts and untimed dailies: you always see the best quality available.

Grass Valley digital tools from Thomson support the way you want to make movies today, and help you make them better. Digital tools for filmmaking professionals.

“Viper captures the scene the way a film camera does: neutrally.”

—Marker Karahadian, President, Plus 8Digital

“We could work with this incredibly light-sensitive Viper format and really see into the night in ways I had not seen before.”
 —Dion Beebe, Oscar®-nominated Cinematographer

“The Viper has this unique, wide range quality that provides extreme flexibility in the transfer.”
 —Stefan Sonnenfeld, Colorist and President, Company 3

Viper

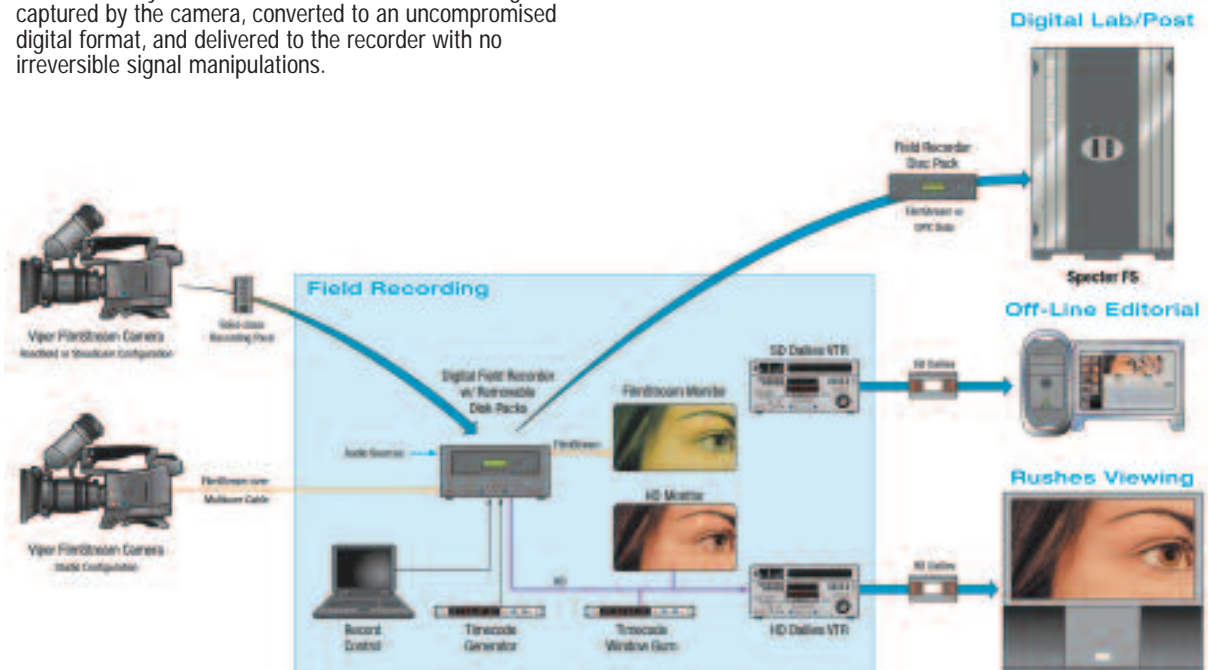


35 mm film cameras have been around for a very long time, and their delightfully simple operation has become entrenched in the way movies are made. Measure the light with a meter. Measure the focus with a tape. A couple of settings and you are shooting.

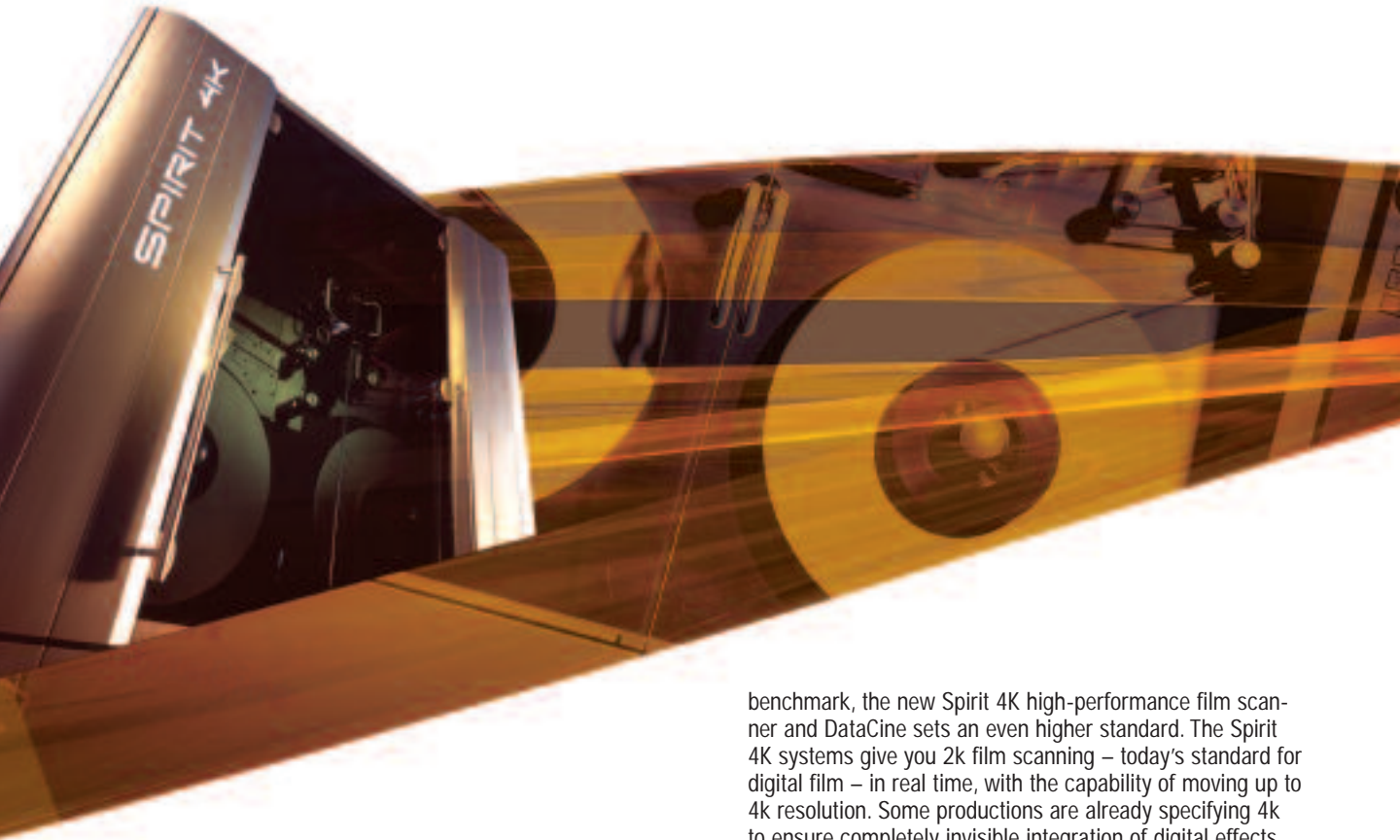
The only way a digital camera can be used successfully in a 35 mm environment is if it can replicate that simplicity. No complex menus, no engineers to set up levels and signal processing—nothing between the cinematographer and the picture. Set the aperture and focus, and know that the camera is catching every nuance of the scene in front of you.

Only the Grass Valley Viper FilmStream Camera System can effortlessly echo that familiar workflow. The image is captured by the camera, converted to an uncompromised digital format, and delivered to the recorder with no irreversible signal manipulations.

In place of the film is a digital recorder. This can be a disk recorder, incorporated into a video assist console. It can even be a solid-state recorder mounted on the back of the camera for complete freedom in handheld or Steadicam shots. The high resolution from the Viper camera is equivalent to a full-resolution film scan on the Spirit DataCine—true movie quality. But digital.



The greatest advance since the advent of nonlinear editing.



There is no doubt that the Grass Valley Spirit DataCine created the atmosphere in which digital intermediate post could flourish. Right from its launch, it instantly became the world's benchmark—setting the standard for film scanning to video and to 2k digital film data.

That benchmark—still stands, and the hundreds of Spirit systems in service around the world continue to deliver high-quality scanning for digital intermediates. All of the classic digitally-finished films— from *Oh Brother, Where Art Thou?* to *Seabiscuit*, from *Amélie* to *Pirates of the Caribbean*—were scanned on a Spirit DataCine.

Why use a Spirit system rather than just a scanner?

Because it is significantly faster than a simple scanner.

The Spirit system offers complete creative control, with comprehensive color processing, in front of your eyes. If you think color timing means waiting 24 hours for an answer print, then you just have to see the color control you have on a Spirit DataCine. And if the Spirit DataCine is still the

benchmark, the new Spirit 4K high-performance film scanner and DataCine sets an even higher standard. The Spirit 4K systems give you 2k film scanning – today's standard for digital film – in real time, with the capability of moving up to 4k resolution. Some productions are already specifying 4k to ensure completely invisible integration of digital effects. In the future, it may be that ultra-high resolution displays will make 4k the everyday working standard.

What both the Spirit DataCine and Spirit 4K systems achieve is a high-resolution, high-quality scan of your original camera negative, ready for seamless integration with footage shot on Viper and computer generated effects and graphics.

"We have a bunch of Spirits which we use 24 hours a day if we can. Now the Spirit 4K is a significant part of our expansion into digital intermediate. It fits our larger model."

—Emory Cohen, President,
Laser Pacific, Hollywood

Whether you shoot on film or with the Viper camera, whether your project is destined for film, digital cinema, HD, or video, you have a single aim in mind: telling your story the best way you can. So it makes sense to have a single post-production workflow which also has this one aim in mind.

By design, the Specter system is the post production platform for storytellers.

It stores—in full film resolution—all the material you need for your movie. Every foot of film you shot if you really need it. Drop in your offline edit and you get a full resolution conformation – instantly. Trim edits and replace right there in the Specter system. View it in a theatre if you wish.



"The future of Éclair is in new technology. With Specter, we need no manipulation of the film from shooting to copying. And with Specter, we can do three different versions of a movie with just a click of the mouse."
 —Christian Ninaud, Technical Director, Laboratoires Éclair, Paris



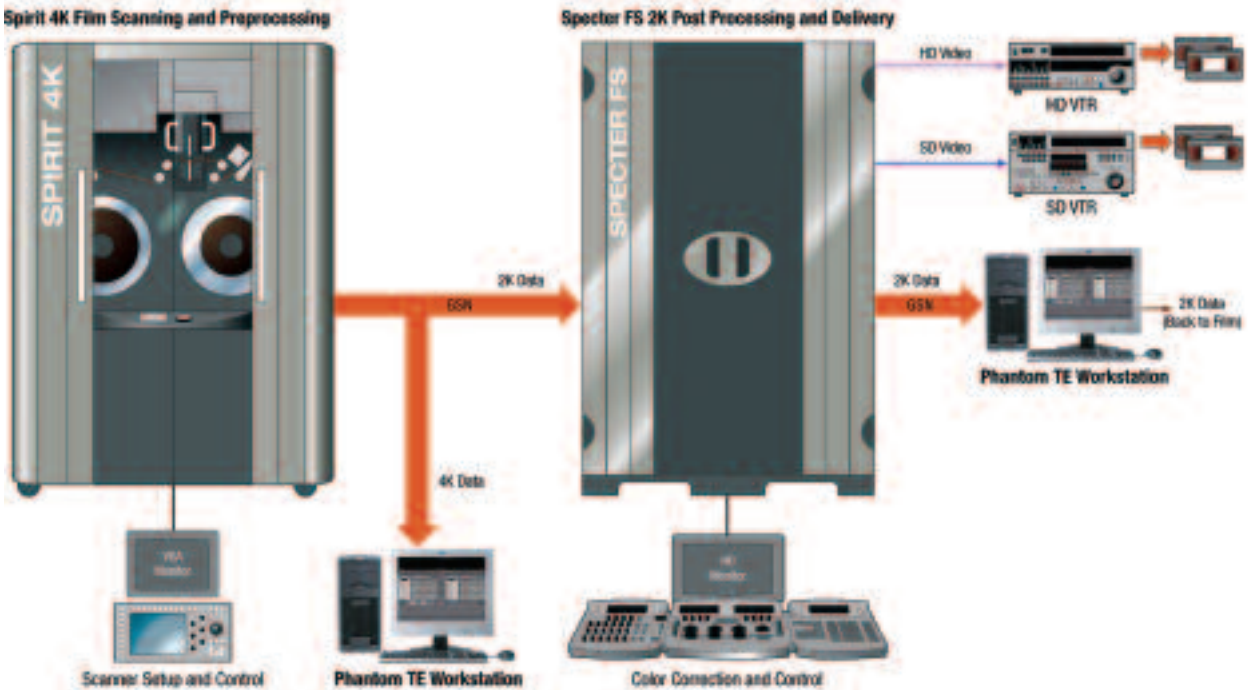
You have the same color control you have with Spirit system, which means not just adjusting the overall color balance but fine-tuning every color in the image. Want to emphasize an emotion by highlighting a specific color? No problem. Want to apply different color treatments to different parts of the picture? Simple. Remember, all this is happening in real time, in front of you. No need for opticals, no waiting for answer prints.

Effects shots? Seamlessly export from the Specter system to the heavyweight workstation of your choice, and equally seamlessly drop back into the Specter system as they are completed. Check the shots as you go, in a fully timed environment. Don't put up with workarounds: see for yourself.

At the end of the job you have a perfect digital master that matches your vision precisely. And every version—release prints, digital cinema files, trailers, DVDs, airline videos—will look identical. Masters for each are run out at the touch of a button.

That is the power of digital intermediate, a power that is only truly realized with the Grass Valley digital filmmaking tools.

Spirit 4K application with Specter FS



Putting it together.



What makes the Grass Valley digital tools process unique is that it is a complete solution, covering everything from film grain removal and dustbusting to compositing and graphics. Whatever you need to do to move from raw footage to the finished film can be done within a single, seamless workflow.

Grass Valley digital tools from Thomson simplify classic tasks such as dustbusting, grain management, upsizing, or film speed changes. The Grass Valley Scream film grain and noise reduction tool sits inside a Spirit or Specter system. The Shout digital restoration tools a highly automated, highly effective dust and scratch remover, slashing the time required to create a pristine digital negative.

▶ "I found my experiences shooting with the Viper FilmStream camera to be an easy transition from shooting with traditional film cameras. I was impressed at how variable we could make its raw images appear."

—Bill Bennett, Cinematographer

▶ "We want to go for the unified field theory of post production—a single, coherent workflow that works whatever the shooting method, whatever the deliverables."

—Emory Cohen, President,
Laser Pacific, Hollywood

The Specter system is an open platform, built using standard computer components, allowing other manufacturers to develop software for it. Already, compositing and effects tools are available to work seamlessly with Grass Valley digital tools offered by Thomson.

Just as directors and cinematographers should not change the way they work, so designers of complex effects and graphics shots should not be forced onto different tools. The Grass Valley digital tools workflow uses an industry-standard digital file format. With the Grass Valley Phantom Transfer Engine, shots can be passed to any other popular graphics system. Use raw elements as placeholders in the Specter timeline, and as soon as each effects shot is completed, it automatically appears in the edit.

On the set through post production to test screenings and final delivery, the Grass Valley digital tools for filmmakers support the way you work, but give you a huge boost in creative power. There is no better way, and no better time, to embrace digital filmmaking.



"The director of photography should now be called the director of imaging. I am now called in to 'light' 3D graphics. Digital film needs to have a common visual vocabulary."
 —Geoff Boyle, Cinematographer



Shout

Phantom



"Previously, dustbusting meant going through each reel, writing timecodes for suspect frames on a piece of paper, and handing it over for manual correction to a paint package. It is all much quicker with Shout. As well as picking up dust, it is very handy for getting rid of scratches —it is an excellent tool for that."
 —Steve Parsons, Framestore CFC, London

Sitting directly in the internal signal path of FilmStream products, the Scream Grain Reducer and Shout Image Restoration tools streamline the defect processing of film-based materials at full 2K resolution. These tools, in the hands of skilled operators, provides sophisticated and subtle control to help you achieve a consistent look across all of your material.

FOR MICHAEL MANN AND DREAMWORKS,
IT STARTED LIKE NO OTHER MOVIE...



Dion Beebe
Director of Photography

Paul Cameron
Director of Photography

Michael Mann
Director

DreamWorks
Studio

Bryan Carroll
Associate Producer

Congratulations on your newest thriller:

COLLATERAL

We are proud to have been able to help you
realize the creative vision of this motion picture.



Grass Valley Viper FilmStream Camera System

