

# JOHN GALT, PANAVISION

**Q&A** Senior vice president of the Advanced Digital Imaging Group inside Panavision, John Galt came to the company in 1999 to start its electronic cinematography group, having previously spent 10 years with an R&D group at Sony.

In his online seminar series, “Demystifying Digital Camera Specifications,” Galt addresses the new language of filmmaking.

## **Videography: How are you demystifying digital camera specifications?**

**Galt:** We’re in the middle of a technology restructure as we move from motion picture processes to electronic imaging processes. We at Panavision were asked by our customers to provide more information on digital imaging technology. Larry Thorpe used to be a colleague at Sony; now he’s at Canon. [Thorpe is national marketing manager, Canon Broadcast & Communication Division.] We were getting prodded by customers asking the same questions. So we started the series.

The next presentation is for cinematographers on some of the practical aspects of measuring digital cameras. There’s a lot of misinformation out there; it’s our job to put some real science behind it. Cinematographers from a film environment are used to a stable, well-defined process. A film camera manufacturer couldn’t make outrageous claims. With electronic cameras, cinematographers need more education to be able to see through the marketing hype.

## **How are you working with other companies to promote education?**

On our Web site, we linked with ARRI for a great paper that deals with the film side



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of digital imaging: scanning film. That’s what we want to see more of. Less hyperbole and more science applied. This happens when companies work together and cross-reference information.

The camera is probably the least expensive part of moviemaking. The most expensive (other than actor salaries) is the postproduction process. If you create a difficult post scenario, it can be very expensive. We think it’s important that cinematographers are able to make these tests themselves, not to have companies like Panavision, Canon or Sony tell them. Rather, we say: “Here are the tools. This is the standard to measure things and here’s how you do it.”

That way it empowers the cinematographer. With film, we were dealing with an infrastructure developed over 100 years. The relationship between the film manufacturers, the cameramen, the laboratories and the post facilities has been incredibly tight and very collaborative. We need to develop a similar process for electronic cameras and electronic post-production processes.

## **What’s next?**

There has been lots of discussion recent-

ly about higher resolution systems. Today’s digital imaging matches the performance of 35mm film. People say we want to go beyond that—to 4K. That is a term badly abused. The term “4K” applies to a line array device. Line arrays for digitizing film work like a photocopier. The line array scans over the film, or the film moves over the line array. A 4K film scan results in the same amount of data as would be produced by a 48-megapixel camera, not the 8 or 10 megapixels of the so-called 4K cameras!

True 4K is four times the resolution compared to what we’re doing—twice horizontal and twice vertical. There are those out there who just take all the pixels in a line—the red, the green and the blue—and add them together and say we have a 4K camera. Not true. This kind of subtle distinction has been lost on a lot of producers and directors.

To build a real 4K camera with the same sensitivity and dynamic range that we have today with existing cameras like Genesis would require a sensor four times the size. Recently Jim Cameron did an interview where he said all the interest in 4K is really the studios trying to differentiate themselves from high-def television, which is 1920x1080 RGB. His point is that we really should be going for higher frame rates than 24 frames per second. He’s proposing 48. I think that’s a more likely trend. Rather than quadrupling the amount of data we’re presently recording, Cameron is suggesting we double it by doubling the frame rate. ■

*The “Demystifying Digital Camera Specifications” master class presentation may be found online: [http://www.panavision.com/in\\_frame\\_detail.php?spotid=20](http://www.panavision.com/in_frame_detail.php?spotid=20)*