

"You're Good to Go!" Stewart Filmscreen Produces Projection Screens Capable Of 4K (And Has For Some Time), And Is Already Asking "What's Next?" ...

The advent of 4K projectors has been a reality for Stewart Filmscreen for some time. The Japanese broadcast and Digital Cinema sectors have been exploring and driving toward the technology for a long time. The simulation and aerospace imaging sectors constantly push pixel density ever tighter, though most often through image blending and matching. The destination is the same though achieved via different means, more pixels per square area.

In the market for screens, there has already been, and will be more trumpeting about what's "4k" capable and what isn't. That's too vague and ignores the big variety of image sizes for various venues. It's not a new goal for Stewart Filmscreen to produce a perfectly planar surface, with perfect high resolution performance, using advanced automotive coating technology, to put each pixel in a perfect setting. Stewart's production techniques are utterly unique in this way. Stewart's aerospace customers have demanded (and Stewart has been delivering) line pair resolutions for scientific imaging using film and digital images in excess of what 4k video projection requires. At Stewart Filmscreen, everybody gets the best technology. Our customers are good to go with 4k.

Added resolution is of course a delight and allows several obvious benefits and some challenges. A 4k engine driven by a 4k source (what source?) or photographic files offers an opportunity to scale the display larger or to situate viewers closer to the screen without the visibility of pixel structure, or observation of artifacts such as stair stepped diagonal or circular image elements, fonts and so forth. Stewart has ranges of fabrics which work beautifully with tightly packed pixel structures, and we've furnished products for many years in the professional and scientific market for that express purpose. Our light diffusing mechanisms operate on a microscopic scale, well out of the viewer's perception.

The challenge presented by the 4k engine is content availability. Absent a pixel for pixel source, the system is dependent on scaling algorithms. There lies the rub. How did that pixel get there, and how is the 4k engine populated within a given frame? We've been there before with DVD or even composite images scaled into 1080 engines.

In addition to 4k engines, Stewart Filmscreen would like to see more activity with higher frame rates. Douglas Trumbull has ably demonstrated the superiority of 72 fps in the Showscan format. James Cameron and Peter Jackson are working in high frame rates for their next films. The ability to produce content in 4k, and or higher frame rates is here.

The consistent delivery of high frame rate image reproduction would be a real breakthrough, aiding the believability of digital cinema of any kind, and a great boost to 3D which has to be interlaced for each eye. Most home cinemas have fabulous resolution, very appropriate for their scale. Higher frame rate would be a stunning enhancement for all digital images regardless of size. With the advancements in camera technology, frame rate is going to be the disparity between the best obtainable digital images and the images obtainable in home cinema.

Stewart Filmscreen is and has always been about image fidelity, and we at Stewart are steadfast in our belief that there is a perfect screen for every application. You can rest assured that regardless of what the future holds for 4k, higher frame rates, or any other emerging technology, the Stewart team stands ready to provide you the right screen for your residential or commercial project.