



**STATEMENT OF WILLIAM SHERAK  
PRESIDENT  
STEREO D  
(DELUXE ENTERTAINMENT SERVICES GROUP)**

**BEFORE THE HOUSE JUDICIARY SUBCOMMITTEE ON COURTS, INTELLECTUAL  
PROPERTY, AND THE INTERNET**

**“INNOVATION IN AMERICA: THE ROLE OF COPYRIGHTS”**

**RAYBURN HOUSE OFFICE BUILDING, ROOM 2141  
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9:30 A.M.**

Chairman Coble, Ranking Member Watt and members of the subcommittee, I want to thank the Committee for the opportunity to testify this morning. My name is William Sherak and I am the President and founder of Stereo D, the leader in high-quality conversions of 2D theatrical content into stereoscopic 3D imagery. We are part of a larger company, Deluxe Entertainment Services Group; with more than 4000 employees across the US, Deluxe is a leading provider of a broad range of services and technologies for the global digital media and entertainment industry.

I want to take a few minutes to share some background into how I started Stereo D and how the economic viability of copyright holders – in this case the film industry – created the opportunity for a company like Stereo D to exist and grow.

In 2009, I was introduced to a scientist who had developed a code to convert still images from 2D to stereoscopic 3D – where two-dimensional images are combined to give the perception of 3D depth. He literally took a picture of me, put it on his laptop, and converted it into a 3D image whose depth made it the most dynamic and lifelike I had seen on a screen. Given that movies are a series of still photos, at that moment, it became clear to me that this conversion technology would transform the movie experience, both for film makers during the production process and audiences whose movie-going experience would be significantly enhanced with a stereoscopic 3D film.

We began as 15 employees who worked with James Cameron to convert several frames during the post-production process on Avatar, the film that forever changed the idea of a 3D film. Overnight, the 3D experience was changed from one that was hokey and underrated to one that immersed the movie-goer in high-quality stereo images, bringing the film to life through more realistic depth perceptions. For the first time, viewers felt as though they were actually in the scene of the movie, instead of watching it on a flat screen. From there, the 3D industry took off and Stereo D was tested and ready to meet the coming demand of high quality 3D conversion.

Since that time – in just over three years -- we have grown to over 1000 employees globally, 400 of which are in Burbank, CA -- where we work side by side with major motion picture studios and the industry's best and most well-known directors, cinematographers, and visual effects supervisors to bring their vision of 3D storytelling for major blockbuster films to life. We have converted "Thor," "Captain America," "Titanic 3D," "The Avengers," "Jurassic Park 3D," "Star Trek: Into Darkness," and most recently "Pacific Rim," and the upcoming "The Wolverine," among others. In fact, I am proud to say that Stereo D was recently named one of the World's Most Innovative Companies by Fast Company magazine.

There is no question that an investment made to convert a film shot in 2D into 3D pays off. When you look at last year's box office report and compare the top grossing film as compared to number two, The Avengers grossed over \$623 million and The Dark Knight Rises finished with \$448 million, a difference of \$175 million. The major differentiator: The Avengers was released in 3D and The Dark Knight Rises was not.

Many think that the conversion process is like the flip of a switch; nothing could be further from the truth. It is a highly technical, highly laborious process that starts with isolating images through rotoscoping, the outlining of every image in every frame. From there, a "depth map" is created for each frame – this entails using various shades of gray to indicate the depth for every object in the frame. Now that you have created depth in places that did not exist before in 2D, the last step requires artists to literally reconstruct or add in new areas created by the 3D image and to do so in a way that it mimics what you see in real life.

To distinguish ourselves in the conversion marketplace, Stereo D employs the best artists and stereographers in the industry. We do much of our recruitment from leading US graphic design and computer technology trade schools, including the DAVE School in Orlando, Florida and Full Sail University in Winter Park, Florida. In fact, the curricula at these schools have been tailored for the conversion of stereoscopic 3D imagery to meet market demands. This has led to a new employment opportunity for this pool of tremendously talented individuals.

It is important to note that we are not the only beneficiary of the dynamic growth of the 3D industry. There are a number of companies that either didn't exist at all or grew as a result of expanding their existing businesses into 3D, such as manufacturers of screens required for 3D movies to be projected onto, the manufacturers and suppliers of 3D products like the 3D glasses, the manufacturers of the 3D projectors, the consumer electronics companies, companies that develop and provide the hardware and software needed in post-production/editing of digitally-produced 3D and even the makers of 3D blu-ray discs.

None of this would be possible without strong copyright protections. While many believe that copyright protections only benefit the holders, the impact is actually much broader and deeper. A copyright system that preserves and protects the rights of creators will foster an environment of certainty under which technologies like ours will continue to be developed, leading to the advancement of the entire film industry. Using Stereo D as a case study, our very existence and growth from the start has been dependent on the ability of our customers to

make an investment in our services. Simply put, if copyright holders are poised to succeed and thrive, so will we.

Moreover, it is the economic viability of copyright holders that drives innovation. As with any business, major film studios make investment decisions based on the expectation of profits. If an environment exists that does not provide adequate copyright protection and blockbuster films become unaffordable and unprofitable due to the threat of piracy, this new and thriving 3D industry will be significantly hampered and severely impacted. The reason being that 3D conversions are normally undertaken on major blockbuster films - the very films that are often the greatest targets of piracy.

Finally, copyright protections can lead to the development of cutting edge technologies in the film industry that will improve the entertainment experience for the general public; foster the development of new and emerging companies that are part of the complex, labor-intensive process that goes into making a film; and will ultimately enable the entire film industry to be successful.