

## Computer Animation, Is It the Right Tool to Use?

by Matthew Beier, Community Editor, and UW-Madison Law Student.  
Copyright © prairielaw.com 1997;1998, <http://www.prairielaw.com>

Recently, there has been much praise of computer animation as the future of courtroom litigation. This is easy enough to embrace given the technological explosion of the past few decades. But before the pendulum swings too far in favor of digital persuasion, are there a few more factors to consider? In order to be admissible evidence at trial, a computer generated animation must be "substantially similar" to the events that gave rise to the suit.

Trial judges enjoy broad discretion in determining whether such an animation will be admitted in trial. They act as "gatekeepers," if you will. It is within their ability to view the animation in the absence of the jury to discover if it is a relevant piece of evidence that is not too prejudicial. Yes, a picture may be worth a thousand words, but the wrong pictures send the wrong message, so the judge will not allow animations that are too far removed from actual events as they are supported by other evidence.

Animations are allowed quite readily and can be effective. In a recent article in Trial Magazine, lawyer Mark Joye heralded computer animation as a "power tool" when used in the courtroom. His firm triumphed in a case against Chrysler using computer animation to demonstrate several eyewitness accounts of an accident involving a minivan. This was a products liability suit involving a faulty latch on the rear door of the minivan. A six-year-old boy was ejected from the door when it opened and he ultimately died. Upon witnessing first-hand the persuasiveness of the computer animation used in this case, not only does Mr. Joye feel plaintiff counsel should use computer animation, he claims plaintiffs need to use it.

However, Joye cautions that a computer animation is not a substitute for preparation. "The computer generated animation is a dynamic visual re-creation of the expert's accident reconstruction. Therefore, creating a persuasive and supportable animation requires the same evidentiary components as any accident reconstruction does." Photographs of the vehicles and accident scene must be taken immediately after the accident because the evidence could change over time. It is important to take proper measurements and take photos of each angle or perspective of eyewitnesses. Accurate location of landmarks is also very important.

Experts need to work hand-in-hand with animators to generate the most accurate scenes possible. All of this involves diligent efforts from all those involved. For this reason, traffic accident reconstructionist, Jim Harris, limits the use of computer animation to a few areas: 1) airplane crashes; 2) crime scene re-enactments, and; 3) some traffic cases. Airplane crashes present an opportunity to present a computer animation of the data collected by the "black box" recordings. Such data is difficult for a jury to understand, and a visual aid based on that information can be extremely helpful.

According to Harris, animation used for crime scene re-enactment has worked with limited success. Invariably, there will be speculation in a criminal trial as to what actually happened and in what sequence, but it does help as a demonstrative aid.

Lastly, Harris uses animations for traffic accidents, but claims that less than 1% of all the traffic cases he has reconstructed in the past 20 years would qualify for one. Animations are not particularly well suited to showing impact and post-impact travel. Cheap animations will have vehicles bouncing off each other like billiard balls; not realistic. This is why it is essential to

carefully weigh options. It may be easier, cheaper, and more effective to use still shots and expert testimony to get the same point across.

He specifically limits the use of animation to two problems posed by traffic accidents, "The best use I have found for animation is the time/distance problem. When you have two vehicles, on different headings, at different speeds, you can show them coming into the collision. Then you can run the same scenario, change the speed of one vehicle and show a collision avoidance situation. This would be best in cases where one car was speeding and if that car was not speeding, everything else being equal, there would be no collision. It is also useful for sight line problems. What could someone see from a certain position?"

Elaborate fact patterns require a good amount of analysis by experts and take time to develop into an animation. All of this can add up very quickly to a sizeable fee. Good animations are expensive. Cheap animations carry the possibility of costing even more. Animations alone, not considering the cost of the expert to collect and sort the data required to produce the exhibit, will cost from \$3,000 to more than \$20,000 according to Harris. Add in the cost of data acquisition by the expert and it goes up quickly. In his article, Mark Joye quotes a price range of \$20,000 to more than \$100,000 for an animation. The numbers may seem astronomical, but if it makes the difference in a trial, it will more than justify the cost.

Complex scenarios that would otherwise need an inordinate amount of explanation and interpretation of raw data create the best opportunities to use computer animation. An animator is not an expert, and the importance of having an expert work closely with the animator is vital to the animation's accuracy. An attempt to "wow" a jury with technology has a danger of backfiring. An expert must be aware that an animation can be attacked frame by frame on cross examination. Because animations are basically cartoon renderings of an engineer's analysis, they are fertile grounds for mistakes. If errors are found, it can appear as though the expert is trying to fudge the facts to fit a theory. This can result in impeached credibility of an expert or worse, exclusion of the animation. Careful consideration of all the available options to present evidence is necessary before committing to computer animation.

For certain, complex cases computer animations may be the new "power tool," but caution must be exercised to prevent overuse and ineffective presentation. Like many other aspects of the law, computer animation cannot win a case by itself. And like all other tools, it is only appropriate to use it when it fits the task.

#### References:

Jim Harris, Harris Technical Services, Traffic Accident Reconstructionists, Port St. Lucie, Florida

Mark C. Joye, Computer Animations, TRIAL, November 1998, 47 - 50.