



Animation will play a bigger role at trial, post-*Duenas*

Is it an animation or a simulation? The Supreme Court's new roadmap for animation admissibility

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Thanks to the fast-paced changes in technology, attorneys now have the ability to create photo-realistic animations on any subject imaginable. With the reduction in cost and time necessary to make animations, they are being used in courtrooms to an ever-increasing degree, and no attorney wants to be in trial without an animation when the other side has one. This “arms race” makes it all the more important for attorneys in any case to consider the following issues:

- Is it an animation or a simulation?
- Will it be admissible?
- Will it help the case? Is it worth the money?

This article will address these issues in light of the recent California Supreme Court decision in *People v. Duenas*, which allowed the Court for the first time to address the issue of admissibility of animations at trial.

First, consider that an animation at trial has the potential to be the most powerful piece of evidence imaginable, which can transport the jury to a crucial moment in time. When an animation is done properly, it can show in a few seconds what no amount of oral expert testimony can get across. An animation can show the physical effects of an injury on the bones, muscles and body in a way that no medical doctor testifying without such a visual could convey. What's more, an animation can break down a complex product or process into easily visible and understandable pieces for a jury.

From the plaintiff's perspective, an animation can create empathy for the

plaintiff in showing the tragic situation of the case and the inability to do anything to prevent what became inevitable. From the defense perspective, the animation can freeze time to show all the choices or decisions made by the plaintiff that could have prevented the incident from occurring at all.

Is it an animation or a simulation?

The *Duenas* decision, which the Court issued in early August, provides a road map for admissibility that is important for any attorney seeking to use an animation.

In order to determine admissibility, the first question the Court in *Duenas* addressed is whether the visual aid is being offered as an animation or a simulation. The Court notes that the important distinction is that “[a]nimations [are] merely used to illustrate an expert's testimony while simulations contain scientific or physical principles requiring validation.” (Opinion p. 23.) The Court continued that “[a]nimations do not draw conclusions; they attempt to recreate a scene or process, thus they are treated like demonstrative aids.” (*Ibid.*) This holding is in line with existing California case making demonstrative evidence admissible for the purpose of illustrating and clarifying a witness's testimony. (*People v. Kynette*, 15 Cal.2d 731, 755 [104 P.2d 794]; *St. George v. Superior Court*, 93 Cal.App.2d 815, 816 [209 P.2d 823]; see Witkin, Cal. Evidence (2d ed. 1966) § 642, p. 604.)

In contrast to an animation, “[c]omputer simulations are created by entering data into computer models which analyze the data and reach a conclusion.” (*Ibid.*)

The basic difference is this: If the visualization is used simply to illustrate a description of what happened, then it is an animation and it is considered demonstrative evidence only; i.e. it shows real evidence, but is not evidence itself. However, if an expert has to rely on a computer model or program to tell him or her what happened, then that's a simulation, and it is “real evidence” that requires all the levels of foundation and acceptance of methods used by the expert to create the simulation before it can be admitted into evidence.

An example of animation v. simulation

Imagine a complex case involving a railroad car that overturns in a canyon and lets out a toxic cloud that rail workers and neighbors are exposed to, and some people on or near the rail car get sick while others do not. Further imagine that the rail company, in defending the suit, hires a battery of experts who use computer modeling to show the wind disbursement of the toxic chemicals through the canyon, trying to prove that the plaintiff could not have been harmed; they create a computer-generated visualization of the canyon, the plume and the plaintiff's location, and they use it to calculate levels of toxins at the various locations. Absent the expert having created this elaborate computer model, the expert actually would have no opinion of whether the plaintiff was exposed to excessive levels of toxic chemicals or not.

Contrast that with an animation showing the train derailment according to how the expert reconstructionist believes/opines it occurred, by breaking



down each element that went wrong and showing that process to the jury.

Under the definition provided in *Duenas*, the first visualization would be considered a simulation since the experts placed data into the computer “which analyze[d] the data and reach[ed] a conclusion.” (Op. p. 23.) However, the second visualization only “illustrates the expert’s opinion,” and as such, is an animation.

Will it be admissible?

Admissibility of animations

As the Supreme Court notes in *Duenas*, “[a] computer animation is admissible if ‘it is a fair and accurate representation of the evidence to which it relates. . .’” (Op. p. 23.) This standard is mirrored in other cases involving demonstrative evidence that do not require demonstrative evidence to be exact, but only substantially similar and helpful to the jury. (See *Andrews v. Barker Brothers Corp.*, 267 Cal.App.2d 530, 537; substantial similarity is shown by comparable lighting, identical intersection, same model car and other relevant factors to those existing at the time of the accident or event in dispute. *People v. Boyd* (1990) 222 CA3d 541, 565-566.)¹

In a case that is analogous to animation admissibility, one involving a dispute on the admissibility of a videotape re-creation of an incident in *People v. Rodrigues* (1994) 8 Cal.4th 1060, the Supreme Court gave the following rule on the factors to examine:

In ruling upon the admissibility of a videotape, a trial court must determine whether: (1) the videotape is a reasonable representation of that which it is alleged to portray; and (2) the use of the videotape would assist the jurors in their determination of the facts of the case or serve to mislead them. (*DiRosario v. Havens* (1987) 196 Cal.App.3d 1224, 1232 [242 Cal.Rptr. 423].) Within these limits, “the physical conditions which existed at the time the event in question occurred need not be duplicated with precision nor is it required that no change has occurred between the

happening of the event and the time the [videotape] is taken.

(*Id.*, at pp. 1232-1233.)

So taken together, *Duenas* and the existing California cases on the subject make for a fairly relaxed standard that goes into the determination of whether an animation is admissible. Such animation need only be a fair and accurate representation and, “the relevant question is not whether the animation represents the underlying events . . . with indisputable accuracy, but whether the animation accurately represents *the expert’s opinion* as to those events.” (Op. p. 24-25 emphasis in original)

Admissibility of simulations

The question of whether a visualization is an animation or a simulation is not an idle question, as it has tremendous consequences for purposes of admissibility. In contrast to an animation, a simulation has a much more difficult road to travel for admission at trial.

The *Duenas* court noted that a computer simulation is admissible only after a preliminary showing that any “‘new scientific technique’ used to develop the simulation has gained general acceptance . . . in the relevant scientific community.” (*People v. Kelly* (1976) 17 Cal.3d 24, 30; see also *Hood, supra*, 53 Cal.App.4th at pp. 969-970). The seminal case of *Frye v. United States* (D.C. Cir.1923) 293 F. 1013, declared:

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in the twilight zone the evidential force of the principle must be recognized, and while the courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, *the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field to which it belongs.*

[Emphasis in original].²

(293 F. at 1014.)

With regard to a simulation, this test raises a potential, great hurdle to admission

of the evidence. If an expert is using a program to analyze data to determine a result, questions arise such as: what algorithms are being used for the calculations; does the expert know; who developed the program; has it been peer reviewed and approved; does the expert have a foundation and training in that program? All these and many more questions can be used to call into question the admissibility of a simulation and make its admission much more difficult at trial.

Potential prejudice

Even if an animation is a fair and accurate representation of what the expert or witness believes occurred, Evidence Code section 352 also potentially comes into play on the issue of prejudice. In *Duenas*, the defendant raised the claim that animations have become far more advanced than in years past, and can create “an unjustified ‘air of technical and scientific certainty.’” (Opinion p. 27-28) Defendant argued that the animation “was likely to beguile the jurors into uncritically accepting the version of events depicted in the animation,” and as such should have been excluded under Evidence Code 352 as being prejudicial. (Opinion p. 27-28) This argument is basically that animations today are so good, that the jury will only remember what they saw in the animation regardless of other evidence.

In 1997, *People v. Hood* (1997) 53 Cal.App.4th 965 held that “[the] computer animations were tantamount to drawings by the experts from both sides to illustrate their testimony.” However, in 1997 the technology of animation was closer to cartoons at best, whereas now animations can be full-scale, photo-realistic re-creations.

In *Duenas*, the argument of prejudice arising out of animations is potentially much stronger than in 1997, but the Supreme Court rejected the argument that animations are inherently prejudicial just because they can have a powerful effect upon the jury. The Court noted that a jury can be sufficiently instructed that



an animation is not an exact re-creation but rather to simply illustrate a witness' testimony.

Will it help the case?

After the admissibility issues are addressed, the basic question remains whether an animation will help the case. The big rule of thumb with any animation is to "do no harm!" A badly conceived animation can be used by the other side to help prove their case.

The goal of the plaintiff attorney in a personal-injury case is to make an animation that creates the most empathy for the plaintiff and also transports the jury to the situation as it occurred. From the defense perspective, the opposite is true; that is, the goal of the defense is to show a clinical and detached version of events that supports their case. A plaintiff animation will more likely strive to be photo-realistic to increase that empathy, whereas a defense animation may intentionally be more clinical or simplistic.

The best animations help show that which the jury cannot see. When an animation either slows down events to make them understandable (such as in an injury case), or allows views into physical objects that are too big or small to see (such as in a construction defect or product liability case), animation definitely helps the case.

When animations are made in a close working relationship with an expert to show the events as the expert believes they occurred, they are extremely valuable. What's more, the process of creating the animation – which forces the attorney

and expert to precisely visualize the case – often helps the attorney and expert hone their theories and strengthen the case. However, if an animation is not to proper scale, or is based on incorrect information or is simply materially wrong, then the animation becomes absolutely useless. The key to making a successful animation is a strong and open line of communication between the attorney, the animator and the experts.

Conclusion

In light of the *Duenas* decision, any animation should be prepared in close collaboration with the expert or witness who will provide the foundation for such animation at trial. If you have a plaintiff who can testify as to how the event occurred from visually seeing it occur, they may be the best witness to use for foundation. Alternatively, if an expert has been retained to explain the incident, the expert is likely the best witness for foundation.

If you are relying upon an expert to provide the foundation for the animation, you should have the animation prepared and presented at that expert's deposition so the opposing party has a chance to review the animation at that time.

I always advise attorneys to start the process as early as possible, and have all relevant documents, photographs and data necessary to create the animation, as soon as possible. Mistakes tend to come from rushed deadlines.

Animations provide attorneys with the ability to create and show literally anything imaginable. The *Duenas* opinion provides an admissibility roadmap that

will help attorneys tailor their future animations to support the testimony of witnesses and experts, thus allowing their admission as proper demonstrative evidence.



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Endnotes

¹ The standard laid out in *Duenas* for animation admissibility is similar to the standard Federal Courts have employed for animations. When such animations are fair and used to illustrate witness testimony, they are admissible. (*United States v. Mohny* (6th Cir. 1991 949 F.2d 1397, 1405), see also *United States v. Beckford* (4th Cir. 2000) 211 F.3d 1266, where computer-generated animations were used to illustrate investigative opinions concerning observations of bullets, bullet holes, and bullet path angles.)

² One commentator summarized *Frye* as requiring courts to determine: (1) the status, in the appropriate scientific community, of the scientific principle underlying the proffered novel evidence; (2) the technique applying the scientific principle; and (3) the application of the technique on the particular occasion. Giannelli, *The Admissibility of Novel Scientific Evidence: Frye v. United States A Half Century Later*, 80 Columbia Law Rev. 1197, 1201 (1980)

