



5 **KEY**
CONSIDERATIONS

**REGARDING THE USE
OF 3D ANIMATION
FOR LITIGATION**

1

START EARLY

Waiting until the last minute to begin animation development in order to reduce trial costs is a common yet misguided approach. This strategy can actually decrease the impact an animation would have on overall case value. Here are three reasons to start your animation early:

1. CASE THEORY

Animations are often perceived as a component of trial. While animations may play a key part in the trial strategy, they may have a more critical role earlier in the case lifecycle. One example is the development of case theory. Although animation is often sought to reinforce case theory, it can also refute it. The objective environment afforded by 3d animation can provide a unique view of key issues not originally seen from a review of documents, reports or films. These details, both positive and negative, allow a case team to choose the most favorable—and therefore most valuable—case theory.

2. SETTLEMENT OPPORTUNITY

A second reason to begin the animation process early is for use during settlement talks. It's no secret both plaintiffs and defense attorneys would rather avoid the cost and uncertainty of trial. During the settlement phase, revealing an animation can be a powerful and persuasive method to increase the value of a case. For plaintiff attorneys, settlement packages with animation may not only increase the frequency of settlements but may also

increase the value by demonstrating a commitment to the case. Any costs incurred creating an animation during this phase can usually be included in the settlement agreement.

3. CREATIVE PROCESS

One final reason to start early is that effective animations simply take time to develop. Animators are talented artists tasked with distilling a lot of information into an effective, observable message. Complex pieces often take weeks to complete and waiting until the eve of trial can limit or eliminate the designer's ability to create a compelling animation. You could also be subjected to rush fees that would increase the cost of providing an animation as part of your case strategy.

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A product liability case for a plaintiff's attorney involved a small construction vehicle. During settlement talks an animation demonstrated two things: the mechanism of injury and an alternative design that would prevent injuries.

The animation was presented to opposing counsel and insurance representatives, leading to a healthy settlement. The cost savings by settling the case early included, but was not limited to, expenses related to trial days, expert reports, depositions, travel, and additional overhead.

5 KEY CONSIDERATIONS REGARDING THE USE OF 3D ANIMATION FOR LITIGATION

2

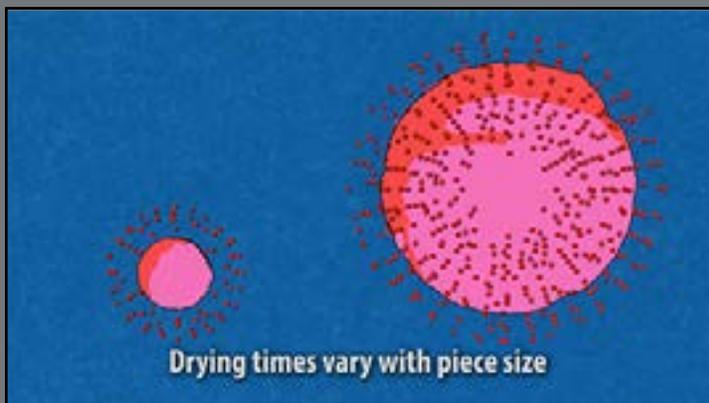
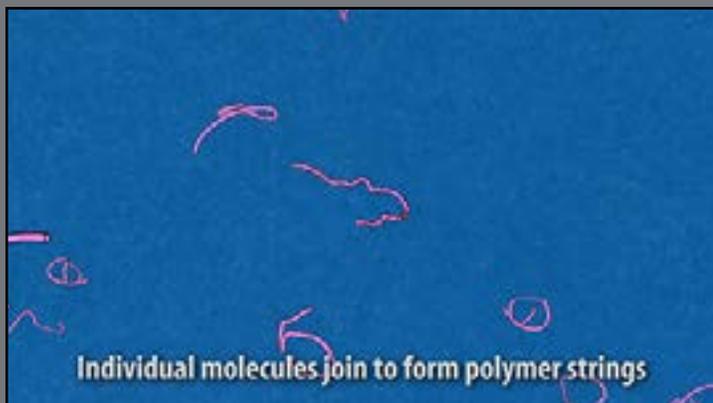
STAY INVOLVED

Working up a case requires the input and attention of key stake holders. It's important to know that developing an animation requires the same level of attention from the same group of people. The key stake holders should stay involved for the entire process to ensure the development process proceeds accurately and optimally.

It's not uncommon for lead attorneys to allow experts to drive the development process. While not necessarily a bad practice, experts may lose focus of the audience (a jury or adjuster) and allow for the creation of overly complex

animations which end up being difficult to comprehend. Therefore, although experts should be involved*, ensuring the final product is best suited for the intended audience should be the responsibility of the key stake holders. Overseeing this process can be as simple as sitting in on conference calls and reviewing animation drafts.

Conversely, neglecting to include your expert in the development process can be ruinous to the case. Imagine investing in a complex animation and additional expert time only to confuse the intended audience.



Working on a case involving a highly complex chemical process, the case team included a well-respected chemical engineer tasked with directing the creation of the animation. It quickly became obvious the expert wanted the animation to contain a level of detail too confusing for the audience to easily digest. Fortunately the lead attorney was involved from the start and requested revisions to the animation to make it simpler. The designer then worked with the entire case team to develop a solution that demonstrated the complex chemical process in a clearer fashion, using cartoon lines and shading as demonstrated above.

****While giving your expert complete reign over developing an animation is not best practice, having them involved in some capacity is crucial to the success. Animations can only be admitted into evidence if validated by an expert or witness. A graphic designer or animator can only testify to the creation of the animation, not to the content.***

5 KEY CONSIDERATIONS REGARDING THE USE OF 3D ANIMATION FOR LITIGATION

3

UNDERSTAND THE PROCESS

Rome wasn't built in a day and the same adage applies to a good animation. We've already addressed the importance of starting early and how it affects the overall quality of the project. Understanding the 3d animation process

helps attorneys to appreciate and plan for the time frame associated with it. There are generally five steps involved with animation production: information gathering, design, modeling, animation, and rendering.

1. INFORMATION GATHERING

Obviously a crucial step. This is the foundation of the project. The key stakeholders present the initial case theory to the design team and collectively, they develop ideas. The animator will review the information and determine the best way to convey the case theory.

2. DESIGN

This is where the ideas come together. All of the information gathered in the first phase will be consolidated into a visual presentation by the animator to the case team (often a storyboard). It is important for the key stakeholders to carefully review these storyboards and make changes as necessary. Revisions at this stage are virtually cost free.

3. MODELING

In this stage, the animator will begin work on what will become the final deliverable—the most tedious and time-consuming phase. This is where the animator will create the product or scene used in the animation. The models can be created by eye or by using technical drawings. Once created, these models will be given color, texture, sheen, etc. Depending on the complexity of the scene, this stage could take weeks to complete.

4. ANIMATION

This is the stage in which the models created in the previous step will begin to “come to life” through movement. Most experienced animators will agree this is the most important stage. The interaction between the models is what will create a persuasive demonstrative.

5. RENDERING

Once all of the hands-on work is done the animator will render the animation. This is a process in which the computer(s) will draw each frame of the animation. While not a labor intensive process, this stage requires significant computing power. Most animations run at 30 frames per second. This means a 3 minute animation will contain 5400 frames, each drawn by the computer!



Still frames of a model in its initial stage or wire frame (top), flat shaded (middle) and fully rendered (bottom).

In the early stages of computer animation, companies would charge for rendering. Realizing that rendering times can vary depending on the power of the computer doing the rendering, most reputable companies today no longer charge for it.

Once the animation process is complete, drafts are created and sent to the case team. It's very important at this point for the case team to review and request revisions promptly. Small revisions may be turned around within days. Major revisions which may require the process to start over could take weeks to complete.

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4 GET IT ADMITTED

If you've gone through the settlement process without resolve and you're headed to trial, it's important to understand that animations must be validated by expert or witness testimony to be admitted into evidence. This validation process begins during the development of the animation. With expert or witness input during the info gathering stage and during draft review, the animator can move forward with confidence.

Failing to gain input from experts or witnesses during the early stages of development could cause significant and costly revisions on the eve of trial. The worst-case scenario

would be having the animation thrown out due lack of authentication.

Animations can fall under two categories: demonstrative and simulation. The majority of animations used in trial fall under the demonstrative category. Demonstrative animations have an easier path to admissibility and cost much less to create. Simulation animations are viewed with more scrutiny and may require testimony from both the expert responsible for the content and the creator of the animation.



A still frame of an animation used for demonstrative evidence.

ANIMATION AS DEMONSTRATIVE EVIDENCE:

Demonstrative evidence is used to educate the audience or explain something. Courts hold demonstrative evidence to a lower relevancy standard with regard to admissibility. Most animations fall into the demonstrative category.

ANIMATION AS SIMULATION EVIDENCE:

Simulation evidence requires a higher standard of admissibility. Animations created as simulations often contain complex data or real-world interactions between objects. Due to their reliance on objective data, simulation animations are more objectionable. They often require the creator of the animation to testify on the process and data used allowing an opportunity for cross examination.

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5

UNDERSTAND THE COST

To most attorneys this is likely the most important question. It's also the one that is hardest to answer. As we have seen, creating an animation has many moving parts. The time spent on each stage of development can vary greatly from project to project, just as creating a

frame for a CGI-animated feature film takes more human and computing hours than a frame of a contemporary animated sitcom. The following guidelines will help in keeping the cost of animation for your case in check, regardless of the subject.

1. KNOW THE CASE

Sounds simple and obvious but fully understanding the case as it relates to your theory is the foundation of the animation. Relaying incorrect information to the designer at this stage can cause costly revisions later in the production process.

2. MORE IS BETTER

Experienced animators would rather have too much information about the case than not enough. Remember animators have a different role on the team. They create a visualization of the subject matter and therefore need to view all of the information to ensure accuracy. Attorneys are often reluctant to send a large collection of photos of a scene or product, thinking they won't be of any value to the animator. This can't be more false. It's beneficial for animators to see all existing views and details related to what they've been tasked with communicating visually.

3. FORM, FUNCTION OR BOTH?

The goal of any litigation animation is to show and persuade an audience. The method used to accomplish these goals can vary. A plaintiff's attorney representing a client injured in a car accident, intending to engage the jury with a flood of details from the incident may create a photo-realistic reenactment of the crash scene, while a patent defense attorney looking to breakdown intricate protocols of a case in a clear way may wish to create a simple, flat-shaded animation. These two types

of animation can vary greatly in terms of time and cost. A photo-realistic animation containing real-life textures, shadow, highlights, shadows, etc. requires more expertise and time to create than a flat shaded animation, yet both can accomplish their respective goals. It's important to talk with the designer about the goal of the animation at the start of development.

4. DON'T WAIT UNTIL THE LAST MINUTE

Waiting until two weeks before trial to start an animation can be a costly mistake. Most graphics firms are constantly juggling production schedules to meet client needs. Jumping in and expecting immediate work comes with a high price. Freelancers may be needed along with overtime and weekend work. All of these added costs can double or triple the price of an animation.



Fully Shaded



Flat Shaded

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ABOUT US

ABOUT THE AUTHOR

Brian Schutzman is creative director at Precise, Inc. With over 20 years of experience—including time spent as a game developer and visual effects artist—Brian is uniquely qualified to manage the company’s multidimensional graphics department. Precise’s extensive capabilities, including photo-realistic animation and interactive graphics development breathe life into the stories of our clients. With a hands-on approach, Brian is able to draw from his vast experience to match creative solutions to the needs of our clients.

ABOUT PRECISE

Since 2000, Precise, Inc. has provided a comprehensive suite of collaborative litigation support services to help law firms and corporate legal teams manage litigation in a defensible, cost-efficient manner. Precise’s collection of advisory, discovery, and trial solutions include workflow process design, forensic data collection and ESI processing capabilities, records and information management expertise, intuitive document review, and professional trial consultation complete with custom graphics and animation, video production services, and sophisticated courtroom presentations. To learn more about how Precise can help your firm level the technology playing field, please visit precise-law.com or call 866-277-3247.

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