

How did you get involved with 3-D?

After producing my animation graduation film in 3-D and putting it online in 2000, I kept receiving e-mails with questions about how to do 3-D for film and animation. 3-D film knowledge is hindered by an enormous amount of disinformation and smoke & mirrors put up by 3-D hardware manufacturers and stereographers. So I decided to provide the information on my website, the3drevolution.com, which very quickly received thousands of hits every day. Since then I have researched every aspect of 3-D film making and have provided consulting for countless 3-D short and film productions, animation and live-action alike. Besides running my animation production company 3-D Revolution Productions.

What are the pluses of 3-D?

The biggest plus of stereoscopic 3-D is the ability to really involve the viewer in the world presented on screen and in the story being told. When employed properly, 3-D is a magical, almost touchable experience that will stay with the viewer for a long, long time, in the best possible way.

And the minuses of 3-D?

One danger of 3-D is the possibility of it taking the viewer out of the story and reminding him that he is watching a 3-D movie. This is done with clumsy 3-D shots. 3-D has also enjoyed a gimmicky name for a long time and this can reflect badly on projects. Quality 3-D will battle this stigma. Another minus is the complexity and the technicality of 3-D, which very easily results in poor 3-D and headaches. The easiest way to avoid these problems is to get a 3-D expert involved from day one of production.

What seems feasible to do in 2007

Stereo 3-D rendering of CGI is, technically speaking, an easy thing to do.

3-D conversion is a hot topic and it is not difficult to convert to 3-D. It requires frame-by-frame work rotoscoping the imagery for depth application and is purely a matter of manual labour.

What's been done since 1895 is to shoot 3-D film with two cameras. Surprisingly, however, 3-D stop-motion has only happened 3 times in film history - one of which was my graduation film!

The same goes for multi-planed 2D animation, drawn or computer-based, with about 5 titles in existence.

How much does it cost compared to regular animation?

Overall one should count on a 120-150% cost compared to regular animation.

First of all you will need to get a 3-D professional involved. Storyboarding needs to be done with extra panels for the 3-D layout, which will cost extra time. 3-D camera setups need to be layed-out, which adds to layout time. Animation needs to be done with an extra dimension in mind, adding to the time spent animating and checking. There are obviously more reshoots and there's double the compositing difficulty. And then there's twice the amount of rendering and disk space required for editing and delivery.

Which projects are more suitable for this technology?

The projects that can employ the stereoscopic image to enhance the story, its characters and their interactions. So are you just creating a 3-D space or are you actually using it? Content-wise, almost anything can work well in 3-D. There are some technical limitations like the current inability to correctly display 3-D on television, the need for 3-D glasses distribution, the eye-tiring factor of 3-D that limits screen time and the inability to do very fast and crazy cuts. Other than that, your imagination is the limit!

Who has done it well and not-so-well in the past?

Only about 20 3-d animated feature films of a total of 220 stereoscopic titles have ever been released since 1915.

In my opinion, *Shrek 4-D* (2003) is the best piece of 3-D film in cinema history. Dreamworks really did an amazing job and I am confident that their future 3-D releases will be very good in terms of 3-D. Other excellent 3-D titles are *The Polar Express*, *Popeye-Ace of Space* and the Disney 1953 classic *Melody*.

A title with botched animation and 3-D is 2001 IMAX release *Haunted Castle*. Shame! Totally safe and boring 3-D is used in *Meet the Robinsons*. It's a different Disney from the one that produced *Melody* alright!