



The Decline and Resurrection of the 3D Industry

With SIGGRAPH 2002 behind us, it seems like an appropriate time to address the present state of the 3D industry. This year's SIGGRAPH saw attendance and exhibitor participation significantly down from previous years, thanks in no small part to the current economic climate. Also, as has been typical of recent years, West Coast locations seem to draw a larger audience given the proximity to the special effects studios. This has prompted action from the SIGGRAPH organization in that they announced the move of the 2004 show from Atlanta to Los Angeles. The 2003 show will take place in San Diego.

World economics and geography aside, this year's SIGGRAPH was a strong indicator of the state of the 3D industry. Since early 2001 it has been apparent that the 3D market is showing signs of stress. The reality is the graphics industry has transitioned past the growth stage of its life cycle, and is now in, what modern business strategists refer to as, the mature life cycle stage.

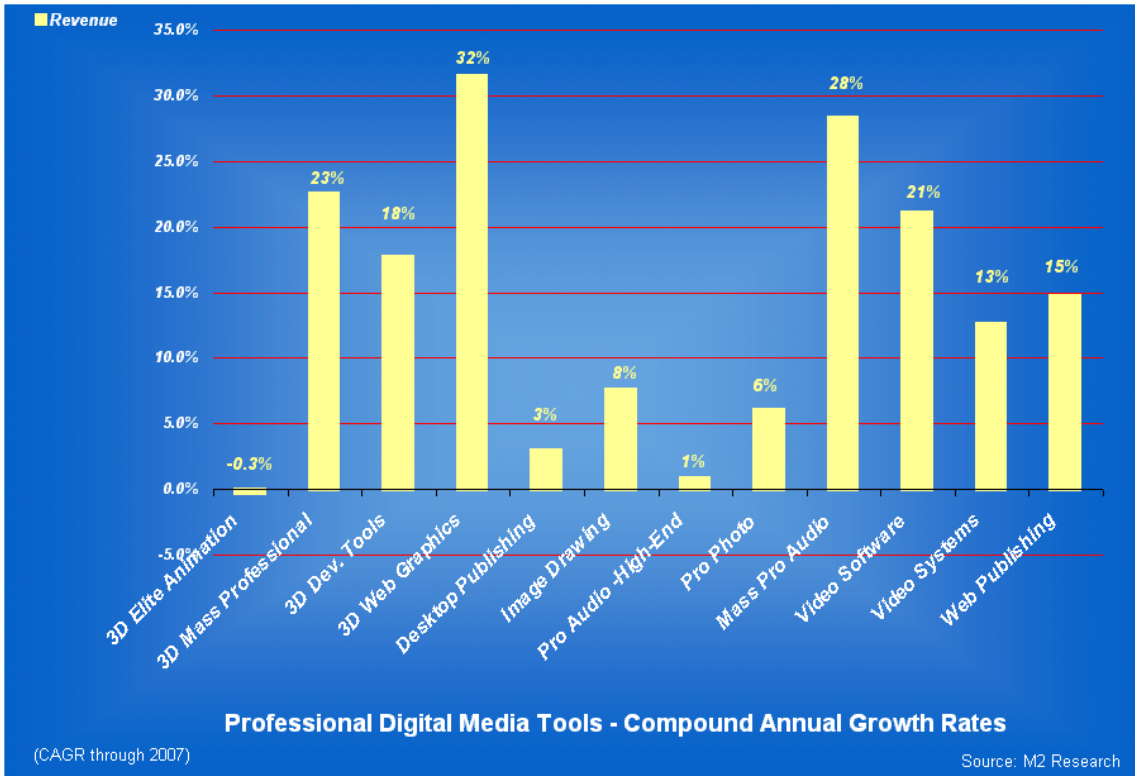
The deluge of new 3D innovation and start-up companies has ebbed. The prosperous growth years as seen during the mid-to-late 1990's have been replaced by consolidation (the first sign of a mature market). This is particularly true of the 3D hardware vendors. In 1998 there were over 40 companies selling 3D graphics hardware, today there are basically 3 main players left – Nvidia, ATI, and 3DLabs.

Another indicator of a mature market is that product capacity begins to outpace user demand. This overcapacity typically results in companies having to lower pricing as a way to maintain sales, thus creating massive pricing wars among the vendors. This phenomenon happened earlier in the year when both Alias/Wavefront and Netwek lowered the price of Maya and Lightwave respectively.

While these price drops do show an initial increase in sales volume, the question is whether or not this growth is sustainable. New Macintosh sales have helped, but this is more likely due to pent-up demand from the Mac community than any real long-term revenue potential. In reality, (at least for the next year or so) any corporate market share increases are likely to come at the expense of competitors rather than any growth at the high-end of the market.

Unlike the 3D hardware vendors, the high-end 3D software vendors such as Discreet, Alias/Wavefront, Softimage, and Lightwave have not yet had to go through any kind of consolidation. This pricing war is most likely an indicator of things to come in the next year.

Conversely, all of the 3D software market is not necessarily entering into this mature stage. There are certain segments of the 3D market that show potential for high growth over the next five years. In particular, segments such as 3D Web Graphics and Mass Professional 3D (3D tools used for professional design-centric purposes), with expected compound annual growth rates (CAGR) in excess of 25%.



It is important to note however, the entire market for 3D Web Graphics currently represents less than 2% of the overall market for professional digital content creation (DCC) tools, which M2 Research estimates reached just over \$4 billion in 2001. (This data is fully detailed in the Digital Media Market Study from M2 Research, which is due out in September 2002).

So, even though the high-end 3D tool market has reached maturity, the use of 3D in more mainstream media applications is entering its growth phase.

M2 estimates that there are over 19 million people creating digital content for professional purposes (meaning, they are using tools that cost over \$250). These users represent a wide range of applications such as web design, graphic design, corporate training and promotions, and audio or video editing. Comparatively, the number of people who incorporate 3D functionality within these applications is just now emerging.



The key barrier for the adoption of 3D in more design-oriented applications continues to be the same – 3D content is the most difficult and complex medium to create. The 3D required for these design functions is going to be a different kind of 3D from what the high-end professionals use. 3D design requires a much less complicated interface, the ability to work seamlessly with multiple media formats, and needs to have a price point that is in line with other digital media design tools - \$250 to \$999.

In the growth stage, an industry moves beyond the need for control over the technology, and proprietary standards become less of an issue. Additionally, in the growth stage companies begin to align themselves with key technology partners. This is the next step for 3D design. Much of the necessary technology exists today to make the kind of 3D content designers will use. Once a standard is established for the Web and the technology alliances are solidified, 3D can truly be a mainstream component of broad-scale content creation.

Consolidation and the maturation of markets is a natural evolution. It is also beneficial to the progression of the technology. This is particularly true for existing companies looking to transition to a more mainstream strategy as a means of maintaining their position in the market. There will be some business and technology shakeout at the high-end, as well as company mergers at the mass professional level. Ultimately, it will be the customer who benefits.