

One man companies with hundreds of employees

The structure of the visual effects industry in a globalized business

Matthias Zbiegely; May 2nd 2007

www.zbiegely.de

Introduction

Currently the Creative Industries are receiving much positive attention. Especially the Visual Effects Business is booming. Nearly every month a new animated CGI movie like Shrek or Open Season is released to cinemas and even in “traditional” movies the number of effect shots is ever rising. While in 1993 “Jurassic Park” had just about a thousand effect shots – and Jurassic Park is supposed to be one of the big effect movies – the 2006 movie “300” had only one shot that had no visual effects. Industrial Light and Magic, which is one of the most well known visual effect companies, tripled in size over the last five years.

So it seems there are a lot of opportunities in such a successful business. But what are the chances of someone trying to make it in the effects industry? Can one only be successful when working for one of the big players? Can smaller studios compete with the big ones and get valuable and attractive work? And what about work pattern such as freelancing or self employment?

This article will focus on models of industrial practice in the VFX industry. I will illustrate different work pipelines and project management ideas using case studies and – in a second part - I will talk about how globalisation changes the industry and how studios can benefit from global networks.

Definition Freelance – Self-employment

In the Introduction I was talking about freelancing and self-employment as possible work patterns. I think that just needs a quick definition to make those terms really clear. The American Heritage of the English language dictionary says a Freelancer is someone who “sells services to employers without a long-term commitment to any of them”. While self-employment means that one is “Earning one's livelihood directly from one's own trade or business rather than as an employee of another.”

So basically Freelancers in the visual effects industry are working for one or more post-production companies while someone who is self-employed is working directly for the clients.

One man companies - Freelancers

The smallest of all work patters is that of a one man company or a freelancer. In terms of finding jobs they both face rather similar problems. One person does not have the necessary work power to tackle large scale productions. To make it clear how much work is involved

in visual effect think about any Pixar film. At Pixar about 150 people are working for 2 years to produce an animated feature film. That means that a single person in theory would need three hundred years to complete such a movie. So one man companies need to find other ways of working.

Freelancers have an advantage over self-employed people here as they get work from the postproduction houses they are working for and can work on bigger productions as part of a team. Self employed on the other hand don't have that opportunity. They need to find work that can be done by one person. There are a lot of niches where such work can be found. Medical and forensic animations and supporting work like wire removals would be examples.

It is very important for both freelancers and self-employed that they have a strong network of professional contacts. They need to make sure that work is coming in and the more people are talking about you (in a positive way) the better. A study by Helen Blair published in 1999 shows that roughly 55% of the work is mediated by friends or family. Only 17% comes from contacting companies directly. It is also advisable to have more than one client. One man companies that are dependant on just one client are not likely to survive should that one client decide to stop working with the freelancer or self-employed. (Taken from the Blair paper as well)

Medium sized studios

By medium sized studios I mean postproduction houses that have a maximum number of 50 employees. At this company size planning, organization and project management gets important. In general one can say the bigger the company is the more specialization there is. While self-employed people have to do everything by themselves in studios with more people there generally are certain categories where people work in. There are modellers, texture- and lighting artists, animators, technical developers and project managers. Depending on the internal working pipeline and the size of the studio people might work in more than one department. The most common pipeline is that people are working simultaneously on the same thing. So it's not a linear process of modelling, texturing and then animating something. While the modelling is still going on animators can start to animate proxy objects, environments can be built and lit, simulation systems for hair and cloth established and so on. It is only to the very end of a project that everything comes together and is rendered as the final animation.

Studios of 50 employees or less are still not quite up to the task of working on the really big projects, at least not on their own. But they can do that if they team up with another medium sized studio. Such collaborations are quite common and one example is the production of the animated children's movie "Little Polar Bear 2 – The mysterious island". The two companies Animationsfabrik (about 40 employees; specializing in 3d animation) and Cartoonfilm (50 employees; specializing in traditional animation) teamed up and were able to produce an animated feature that the companies couldn't have done on their own. The key to success here, just as in standalone companies, is a good project management so that everyone knows what people are doing and what the current status of a project is. Animationsfabrik for example has about 15 artists working in house plus 25 freelancers working from home managed by 10 project managers.

Big players

The big names in the visual effects industry are companies like Industrial Light and Magic, Weta, Blur Studios and London based Framestore, the Mill and the Moving Picture Company. But while for example ILM is very well known for its effect work and is regarded as one of the largest companies in that area there is, it isn't so big after all. ILM only employs about 400 people and that includes accounting staff. It is only the freelancers that are hired on a per-project basis that make ILM so big. At peak times during the production of the StarWars prequels there were more than 1400 people working at ILM.

Yet the internal pipeline of the big players is very similar to the one of medium sized studios. There might be even more specialization and the amount of custom built software is bigger due to the fact that all big studios have a computer science department that programs custom software as needed.

But even the biggest studio can't survive without having connections to other studios. No major production is done by a single studio anymore. All productions get split up and more than one studio is working on the effect shots. There is a tight network for collaboration between most of the big companies. ILM is connected to Pixar (a former part of ILM), Digital Domain (founded by former ILM president Scott Ross), Sony Picture Imageworks (former ILM Director of Technology Lincoln Hu works there now), Weta Digital (setup by a few former ILMs) and Electronic Arts (which employs lots of former ILM art supervisors).

In addition to the collaboration of the big names there also is a lot of sub-contracting going on. Most of the more basic and repetitive tasks of visual effects are outsourced to smaller companies so the big ones can concentrate on the challenging (and prestigious) work.

Shifting Risk

Sub-contracting other studios as well as working with freelancers not only helps to be able to concentrate on "good" work but also has financial benefits as the financial risk shifts down to the sub-contractors and freelancers. When you work with a large amount of core-staff you'll have to pay wages even when there is no work, whereas when you hire people just for a project you only have to pay them when they are actually doing work (and generating income).

24/7 companies

So far all the models of industrial practice I've been talking about were rather classical forms of entrepreneurship. But what about new, emerging ones? And how could the visual effects industry benefit from a globalized world with international computer networks already established?

One form that an international company could take is that of Berlin Film Company. BFC is based in Berlin and Los Angeles but the physical location of the company is not important at all. The only people working at the offices in those two towns are tech people taking care of

computer equipment (renderfarms and database servers), accounting staff and project managers. All artists work as freelancers from their respective home offices from all over the world. BFC maintains a 24/7 workforce taking advantage of all time zones. People in China start working on something. When it's evening in China it's morning in Europe so the Chinese pass it on to the European who continue their work and they can pass it on to Americans. Because of this BFC can meet extremely tight deadlines giving it an advantage over most other postproduction studios.

Cel-Shops

Another way of working internationally is to take advantage of cheaper wages in foreign countries. What the manufacturing industry (cloths, cars,...) has been doing for quite a long time is now being adapted by the VFX industry as well. A good example for outsourcing animation to Asian countries is traditional 2d animation where the character animator only draws the key poses and all the in-betweens are drawn at cheaper Asian animation studios (called cel-shops). But there are also opportunities for 3d animations to save money by outsourcing. Walt Disney, Warner Broth and Sony recently signed contracts with Asian animation studios for tasks like render services and character animation.

The total cost for making a full-length animated film in America is estimated to be \$100 to \$175 million. In India it can be made for \$15 to \$25 million. At the Philippines and in China the same movie would cost \$10 to 18\$ million.

Conclusion

When we think of the questions I had asked in the introduction to this article - Can one only be successful when working for one of the big players? Can smaller studios compete with the big ones and get valuable and attractive work? – We can say now that yes, small studios can compete with the big ones when they either find niches where they can work on their own or team up with other studios to work on bigger projects. Globalisation also offers a lot for both small and big studios. Outsourcing animation to Asian countries helps to keep costs down and truly international 24/7 companies can access worldwide knowledge and work at unparalleled speed.

So the future seems to be quite bright for the Visual Effects Industry.