DON'T WASTE YOUR LIFE WAITING- Thunderbolt™ 3 provides a fast post-production experience for "Happy Dorm"

"Silent Code" was the first Taiwanese film to feature both animation and live action footage and achieved good results at the box office in 2012. The director, Shih-Yung Lin, was also nominated for best new director at the 49th Golden Horse Awards. Although the film has done well, Shih-Yung Lin hopes he isn't pigeonholed as a director of animated films. It was his background in mathematics, interest in cartoons and reading a large variety of comics that contributed to the idea of creating an animated film. Lin's university had no film department and he was a very quiet person, so it was hard to find a partner to film with. He worked on his own using the skills he learned from a 3D animation evening class to create his animated story. With his engineering background, he quickly became proficient with the software. With no training in traditional aesthetics, Lin relied on comments from the online community when making revisions to the film.

Shih-Yung Lin's first film won a competition and he was accepted to the School of Animation at the National Taiwan University of Arts. Lin did not forget his roots, and after earning his Master's degree, he filmed "Silent Code" as a thank you to his online friends and to let them know that it is possible for the Internet to be a positive force. With some film-making experience and experience teaching in several tertiary institutions under his belt, Lin's creative approach was no longer limited to animation, and he came up with the idea of filming "Happy Dorm". With his understanding of creative tools and of the importance of time management, Lin used the latest Thunderbolt™ 3 technology to increase creative efficiency throughout the entire filming process.

The idea for the story behind "Happy Dorm" started forming while we were cutting "Silent Code". Taiwan needs a new type of comedy. The most popular summer holiday film in Taiwan is a student romantic comedy. Maybe it's because I'm not a very serious person, but I really wanted to make a unique romantic comedy, not the usual kind of teen film produced in Taiwan. In 2012, films like "You Are the Apple of my Eye" and "Our Times" inspired me to start thinking about a story set in a university dormitory.

Young people are often treated unreasonably by adults. In our parents' generation, they probably just accepted it, but young people today want to stand up for themselves.
I wanted to put all these things into a film. In the film, a freshman discovers that the dormitory he has just moved into is about to be demolished due to the bad behaviour of the other male students. The male students feel that the school's reason for demolishing the dormitory is absurd, so they set out to blacken the reputation of the newly built girl's dormitory, hoping that the school will reconsider its decision (or demolish both dormitories).

I didn't want to make a film that was just about making people laugh, so when writing the script I tried to include things that had actually happened on Taiwanese campuses.
I really wanted to get across the message that the power of young people cannot be ignored. I wanted everyone to see a film featuring things that only university students get to do, to give Taiwanese audiences the chance to see a romantic comedy that was a little different to Taiwan's usual teen films.

Tell us about the making of Happy Dorm

I found the producer of Café·Waiting·Love, and started looking for a crew at the beginning of last year. I'm a new director, and really want audience approval, but I also want to give new performers a chance, so I used a lot of new actors, so audiences have a chance to see some new faces. In the past, lots of successful films didn't have a famous cast when they started filming, so I didn't care about using new actors.

We used ARRI Alexa cameras together with RAW recorders to store the footage as small files, then had the post-production company cut and edit the small files before joining them together as a large file when adjusting the brightness and colour. Each day, we would immediately send a backup of the digital footage file to the post-production company and I would also keep a personal copy to examine. We filmed for about 45 days, and the post-production company completed the final cut within two weeks of finishing filming. I cut the film again and showed it to the investors, film company and distributor so they could share their opinions regarding any revisions they thought necessary. The original cut was 2 hours and 20 minutes long, but the final version to be released is 1 hour 55 minutes. We filmed from the start of August until the middle of September last year and have continued cutting and editing the film until now (laughs).

What was it like to both direct and cut the film?

Coming from a background in animation, we had a story board before we starting filming and stuck to it throughout. So, compared to other films, the cameramen and editing staff didn't have much room to play around with. Despite this, as long as there was time, I let the cameramen try things out when they wanted to. As for editing the film, I already knew how to cut the film and had already thought out the structure of the story, so it was a bit like painting by numbers for the editing staff. The advantage of having a story board is that you don't have to re-shoot anything. As long as you shoot all the frames from the story board, they will all join together coherently and any extra impromptu footage shot by the cameramen can be added in as a surprise at the cutting stage.

I usually only start making revisions once the first cut is ready. I ask the post-production company to output some small files for me to take away and make adjustments to based on comments from the shareholders. Once the adjustments have been made, I take the small files back to the post-production company for them to join together.

What role do storage devices play when creating a film?

In the past, after finishing a film I would be left with a stack of hard disks or a redundant array of independent disks (RAID). To me, hard disks are really important, as they can store personal memories. The process of retrieving these memories gets faster each year. It used to be really slow. With "Silent Code", the redundant array of independent disks was using 10G network cables. Now we have progressed to Thunderbolt™ 3; it's a massive leap forward.


I feel that hard disks are consumables, but at the same time, there is a real difference in quality between different hard disks. The thing I am most afraid of in life is wasting time waiting for things. Hard disk transfer speeds are getting faster every year, but film file sizes are also increasing. Although transfer times haven't gotten shorter, the picture quality has improved. Faster transfer speeds and shorter waiting times mean more time for being creative. As we enter the digital age, revisions are becoming faster. Constant revisions mean the final film is better. More hard disks are needed to ensure the final film is displayed at its best. Therefore, storage devices are really important for me. Like meals, you need them with you at all times.

As a director, how do you decide which equipment to use?

I always choose the fastest equipment. Animated films often require rendering and, as a PC user, that takes a lot of hardware. Apple® hardware is fixed, so I use a PC. However, the transmission interface on a

Tip: Equipment used by director Shih-Yung Lin for Happy Dorm:

Dual Video adapter (HDMI and DP)
Link to projector for presentation

When meeting somewhere else
When working in the studio

TBT3 cable

Thunderbolt™ 3 to Thunderbolt™ Adapter

Dell™ Alienware™ 15

AKiTiO®
Thunder3 PCIe SSD (1TB)

G-technology™
G-speed® studio XL (64TB)

PC is relatively slow. I used to really envy Mac® users, who were able to use Thunderbolt™. Later, PC motherboards started to support Thunderbolt™, but I had just purchased a new computer, so I had to use a USB 3.0 plug-in, even using an internal RAID to increase access speeds. I was really happy to see a PC that supports Thunderbolt™3. PC users can finally have the chance to use high-speed transmission. Thunderbolt™ 3 can also be used in tandem with Thunderbolt™ 2 hard disks.
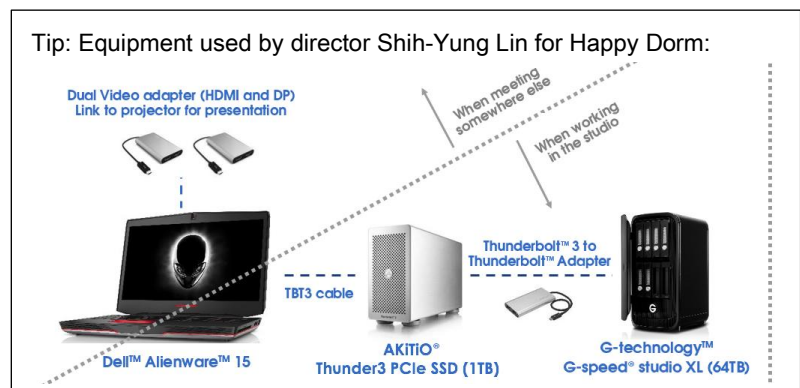
For Happy Dorm we used a 64TB Thunderbolt^{TM} 2 RAID G-technology G-speed studio XL (64TB). When we purchased it last year, PCs didn't support it so we couldn't use it. We had to access all the data using a Mac®. Later, we got a Thunderbolt^{TM} 3 AKiTiO® Thunder3 PCIe SSD, which we were able to use as a relay device to connect the Alienware laptop to the Thunderbolt^{TM} 2 array (it can now be connected to a PC). For PC users, the concept of connecting storage devices in series is very new. Thunderbolt^{TM} 3 allows both PC and Mac® users to transfer files easily. Some of the film crew use Macs® and I use a PC, so the RAID internal drive is formatted in exFAT, so both systems are able to communicate with each other easily.

How does Thunderbolt^{TM} 3 differ from other transmission interfaces?

First, once the USB Type-C came out, users finally didn't have to think about plug orientation and cable direction anymore. Although this is just a small design feature, it's actually really important! The connector is often black, so it's easy to insert it incorrectly. My mobile also now has a Type-C port. Especially now I have a child, I can't turn on the light when I want to charge my phone in the middle of the night (laughs). The second advantage of Thunderbolt^{TM} 3 is the series connection function. It's like a connectable graphics card, which has redefined the way I think about laptop computers.

> *"Once the USB Type-C came out, users finally didn't have to think about plug orientation and cable direction any more. Although this is just a small design feature, it's actually really important!"*

Tip:
USB Type-C is just one of many different types of USB port. USB Type-Cs with Thunderbolt^{TM} 3 have a lightning symbol. Not all USB Type-Cs have two-way data transfer and video signal functions.

Previously, I would always buy laptops with an independent graphics card, but I don't want my laptop to be too heavy. There is always a conflict between performance and weight, which leaves very few options. Now the graphics card can be connected externally using Thunderbolt^{TM} 3. When I'm out at a meeting I can use a really light, thin laptop and then when I get home or when I get to work and I need to do some editing, I can just connect the external graphics card. Now I can have a light laptop and satisfy my performance needs.
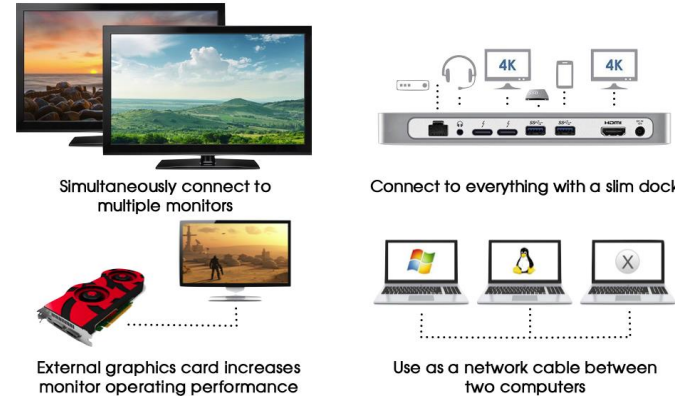
What impact will Thunderbolt™ products have on directors in the future?

I want to replace everything with Thunderbolt™ 3 products. To do the best job, we need the best tools. I have always liked using the latest things. For some people, it's about being cool, but for me, it's about assisting my work. Life is short and I'm terrified of wasting time waiting for things. If I can reduce time spent waiting, then I'm using money to buy time. For me, it's totally worth it. Currently, Thunderbolt™ 3 is the fastest product, so next time I will make sure all the company computers use Thunderbolt™ 3 devices.

If you want to know more about Thunderbolt™ 3, please visit https://thunderbolttechnology.net/ or follow us on social network.

Tip: 4 ways to use Thunderbolt™ 3:

Simultaneously connect to multiple monitors

Connect to everything with a slim dock

External graphics card increases monitor operating performance

Use as a network cable between two computers