Making Machinima in Second Life

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For the latest information, please see http://www.secondlife.com/machinima

Overview

Making movies in Second Life can be as easy as capturing what's in your viewer at any given moment, or as complex as building your own virtual sets, uploading textures, uploading character animations, enlisting actors…and the list goes on.

Second Life has built-in video capture capability, enabling residents to set frame size, codec, and to start/stop the capture process saving footage onto their hard drive. There are several other programs that provide video capture capability with the price starting at $30.00US. Many do a great job of capturing high quality footage while maintaining high frame rates.

Regardless of how you capture footage, there are two important considerations to keep in mind: make sure you have a significant amount of free space on your hard drive, and make sure you have the most current codecs (compressor/de-compressor algorithms).

Technical tips

- When setting up a scene, try to isolate the action in a way that prevents extraneous background objects from coming into view. This will help you maintain a more consistent frame rate – especially if there is a lot of action in the scene.
- Experiment with scripted movie cameras that you can find and buy in world. The camera controls available in the kit will help you get smooth, consistent frame rates and camera movement. Additionally, this camera allows for multiple takes; perfectly duplicating each move.
- Try to capture footage in a larger format than what you plan to deliver. For example, capture at 640x480 when your output is going to be 320x240. This technique helps minimize image degradation.
- Enlist the help of 'specialists' in-world, like avatar animators, texture artists and script writers (C-based scripting is supported in SL). This will expedite your production and give you very high quality work – and people are always eager to help.

Creative tips

- Always pad your capture by recording several frames in front of- and at the end of your action. This makes the editing process much easier, and allows you more flexibility with transitions.
- Move the camera slowly. Fast moving cameras can be confusing for the audience and ruin the experience for them.
- Try several views of the same action. This will give you more creative freedom when you're editing.
- Begin with a well thought out script. Randomly captured video may be interesting for a few seconds, but quickly falls apart if there is no clear storyline.

Silver Bells and Golden Spurs
Production Demo

OVERVIEW

As an exploration of the movie making capabilities of Second Life, and as a proof of concept for doing such, I chose to produce a short western film based on an old poem called "Silver Bells and Golden Spurs".

The functionality of Second Life as a movie making medium turned a corner with the release of v1.4, which provided its residents the ability to create custom avatar animations and upload them in world.

Although still in development, the power and diversity of Second Life as a platform for movie making is obvious. As improvements are made to support and simplify the processes used for modeling, texturing, animation and video capture, residents in Second Life will find this environment perfect for telling stories through film.

With all the available tools in Second Life, including customized art and animation, as well as the collaboration of other residents, anyone can create beautiful, compelling movies only limited by his or her imagination.

PRODUCTION COSTS

The cost of creating this demo film was roughly $555.00 USD. This figure includes $66,000 Linden Dollars (~$165.00 converted to USD), which was paid to residents who worked on the production, as well as $390.00 USD for in world land ownership fees.

An asset list helped to streamline production and keep costs down, as well as to make sure no details were overlooked.

The set and all of the props were created on a single plot of land, maximizing potential while minimizing overhead. Additionally, all of the footage was captured on and saved to a single hard drive, so there were no costs for cameras, converters and other equipment. Editing and graphics were also done on the same computer.

DISTRIBUTION POSSIBILITIES

Second Life's built-in video capture utility enables a variety of distribution choices which depend on compression and frame size at the time of capture.

Capture for this demo film, however, was done using Fraps; an off-the-shelf video capture tool that allows the director to monitor frame rates and provides more robust functionality during the capture process.

From start to finish, the process of capturing film footage is entirely digital and easily managed. Knowing that this demo film would be viewed over an office network from a central server, the capture was done at 640x480, which was well beyond what was needed to capture subtleties in imagery. The film was then processed using different compression settings, outputting versions that could stream over the internet, used as download, or even burned to DVD.

VIDEO QUALITY

The quality of video captured in Second Life is largely based on two factors: frame size and type of compression. Using the right compression, captures in larger frame sizes will maintain visual integrity, and provides a broader variety of delivery choices. Capturing with smaller frame sizes will limit your delivery choices.

Second Life has three pre-set frame sizes and prompts the user to choose one of the .avi compressors installed on the computer. More advanced features include a variety of aspect ratios and custom frame sizes, all configured within the preferences dialog of the program.

Third party capture programs are also available, such as Fraps, providing an even broader range of quality and delivery potential.

PRODUCTION TIME

Like most film projects, time was the biggest factor in completing this demo film. The piece needed to be done quickly, so I enlisted the help of several residents.

This production took significantly less time than a comparable project in another medium, or with real sets and actors. The very nature of Second Life and its resident base provides a multitude of sets, props and actors, tremendously reducing set construction and casting time. Specialists in modeling, texturing, scripting, audio and avatar animation are always available and eager to help, enabling directors and producers to spread the workload around while keeping control of the production.

BUSINESS OPPORTUNITES

Opportunities in a variety of trades are increasing as the creation of Machinima films becomes more popular. Set design and construction, production management, modeling and avatar customization are just a few of the many areas in which demand are rising. You will find Second Life residents offering their services for $USD, Linden Dollars, trade and, occasionally free of charge.

Several movies have already been made in Second Life, ranging from music videos and short stories to a pilot for a TV series (currently in pre-production). Moreover, the power, freedom and efficiency of Second Life is being noticed in the education, business, and science sectors, as the potential of lucrative opportunities is on the rise.

CONVENIENCE

Second Life was the perfect canvas for the production of the "Silver Bells and Golden Spurs" demo. The ability to upload character specific animations, textures and sound, allowed the production to be tailored perfectly to the script. Direction, lighting, cinematography and casting were done solely from within Second Life, which made the entire process manageable and easy.

Since no external equipment is needed, you can produce full-fledged films in Second Life, delivering finished products on DVD, CD, or via the Internet, all without leaving the hard drive.

Probably the biggest convenience of using Second Life is that its broad user base has already created many popular world locations. Movie sets such as European cities, fantasy lands, alien planets, the old west, and more are easily found in world. Moreover, countless props already exist in world and can be purchased at any of a number of stores. Most importantly in the case that the appropriate set or prop doesn't exist, it can be quickly created using the built-in modeling, texturing and scripting tools.