Animation Team and Workflow ----------→ Lesson 3

Studios follow a meticulous workflow to get their movie from script to screen. A studio's workflow represents all the steps a production has to follow in order to get the script to the final film stage. Each step must be done at a particular moment in the production in order for it to come to completion. In this lesson, you will be introduced to all of the required staff, as well as the different types of workflow, or system, studios follow while in production.

Someone making a short animated film at home might be able to create their film from start to finish, but on a big movie or TV production, it is a much bigger process! In the following section, you will see a list of all the staff required to take a full animated movie production from concept to completion.

Director (2D and 3D)

The director is the creative top gun, responsible for the creative vision and interpretation of the project. Perhaps, in the amateur world of animated filmmaking, the director may also be the producer, the writer, and one of the animation team too, but in larger, more mainstream productions, the director will stand alone and have the one responsibility with that production.

All directors will direct in their own individual way and hopefully they will have creative freedom to direct a project with their own creative vision. However, ultimately, they do have to work somewhat in tandem with the project's producer, whose job it is to support the director through the smooth operation of the more administrative aspects of the production.

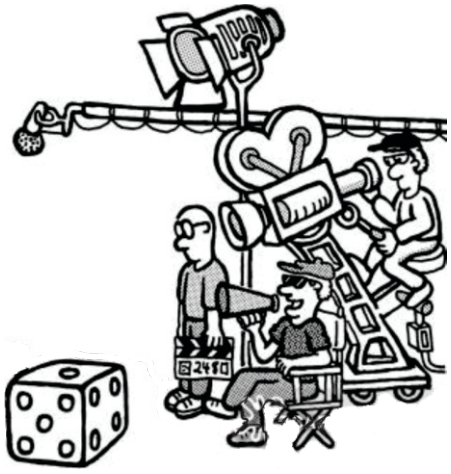
Disney's director Henry Selick as he instructs one of his staff while making an animated movie as shown in the picture(right)..

Producer (2D and 3D)

In animation, the producer is essentially the director's production manager. His or her job is to keep a tight rein on the administrative side of the production, ensuring that the budget and scheduling are being kept under control and that the creative team has everything they need. The producer will also be responsible for identifying and contracting the necessary creative team. Like the director, the producer may have been involved in the legal, financial, and pre-production elements of a project, but not always so.

On a large film production, he or she may even be required to raise the production finance in the first place, although this is usually the domain of the executive producer. In some instances, such as advertising and certain film and TV work, the producer's job can also be to attract work for the studio or the director in question, depending on how big the operation is.

Production Manager (2D and 3D)



Although this is more the domain of live-action filmmaking, it can sometimes be necessary to employ a production manager on an animated project. The production manager would effectively be the right hand man (or woman) of the producer, doing the daily chores that relate to animation filmmaking, such as checking the progress of each of the artists on a daily basis, oiling the nuts and bolts of production, and generally supporting the producer in any way needed. Again, this is an administrative role, not a creative one.

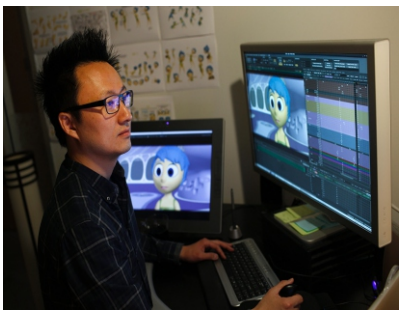
Character Modeler (3D)

Although sometimes the character modeler's involvement can be at the pre-production stage, most of the key character models required for a film are created during main production. Usually, there is more than one character modeler assigned to a project, unless the film is a small personal effort with very few characters. The character modeler is responsible for creating, rigging, and weighting all the 3D characters the animators will be working with in the film. The better, or more experienced modelers, will be assigned to the main characters and the less experienced ones will be assigned to the secondary and crowd characters.

Production Designer (2D and 3D)

As with the main character modeler, the production designer's involvement might well be at the pre-production stage, when the characters, backgrounds, and overall concept art is created. It is nevertheless quite feasible that one or more production designers (depending on the project size) remain on staff to handle all the smaller design decisions that inevitably crop up as the production progresses. The designer may not be hired for the entire production period however, although they are certainly a valuable contributor to the team during the early stages of the production proper.

Animator (2D and 3D)



It goes without saying that an animated production needs an animator (or animators) to bring the concept to the screen. Animators fall under many categories (apart from them being either 2D or 3D animators in the first place). There are character animators (who bring performance and personality to the characters in the production), special effects animators (who animate everything that is not character animation, including fire, earth, air, and water effects), graphic animators (who specialize more in the movement of graphics and titles within a production) and model animators (who do all the above things using puppets, models, or clay-based characters to achieve the required effect).

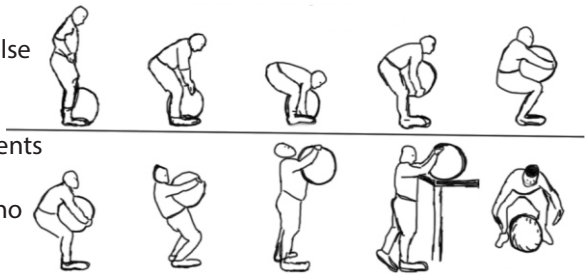
It is the animator's job to appraise themselves fully with the nature, personality and capability of what is to be animated; listen to the director's wishes and timings; then produce the movement and actions accordingly. Although essentially a solo operation, animation is also a team effort and animators must be mindful and respectful of what the other animators are doing with (quite often) the same characters. Consistency and continuity is a very important aspect of many animated productions and therefore the animator needs to attempt to keep this consistency with other animators.

Assistant Animator (2D)

In an ideal world, the assistant animator has almost as much capability and responsibility as the main (key) animator. Traditionally, at least at the Disney studio during the golden age, the assistant animator was a major figure in the production scheme of things, not just the guy who did the other drawings.

In an ideal world, the assistant animator has almost as much capability and responsibility as the main (key) animator. Traditionally, at least at the Disney studio during the golden age, the assistant animator was a major figure in the production scheme of things, not just the guy who did the other drawings.

Inbetweener (2D)



The role of inbetweener is a redundant one in most productions today, or else its title is used synonymously with that of assistant animator. In the times when animation operated on an apprenticeship system (where a beginner could start at the bottom and work their way through the various departments until they were eventually assigned to a master animator who would teach them everything about animation), the inbetweener would be a newbie who would work with the assistant animator to get all the lesser inbetween drawings completed for the key animator.

The inbetweener would therefore perhaps be asked to do the more mindless, less creative work, the most creative being done by the key animator and the next most creative done by the assistant animator. Inbetweeners did the slog work. However, if they did it well enough, they would eventually make assistant animator and those who wanted to progress further would ultimately make key animator. Picture on your top right is an example work of an Inbetweener.

Clean-Up Artist (2D)

Most animators work rough, for example, they draw the characters in pencil, to the best of their ability. This is followed through with the inbetweening too. However, from animator to animator, there can be a certain difference in the animated character design, sometimes subtle, sometimes gross. Also, pencil lines do not scan as well as black ink line does. So, with most ambitious productions, a skilled artist will be assigned to review the animated pencil drawings, to give everything a consistency in character design and to ink them in for scanning. This person is known as a clean-up artist.

The clean-up artist clearly has to be skilled in consistent drawing and inking in. Fortunately, the illustrated and comic book industries have provided a ground swell of artists that are capable of doing this, especially in manga-crazed Japan. However, many productions don't consider clean-up to be an essential facet of the production process and therefore the animator is required to produce their own cleaned up drawings that can go straight into scanning. The picture(immediate top right) is an example of a clean-up artist.

Environmental Modeler (3D)

Like the 3D character modeler, a 3D film cannot exist without backgrounds, whether they are interior settings or exterior locations. The environmental modeling requirement from 3D film to 3D film may be wildly varied. If there are a few simple settings, then it is likely that only one environmental modeler would be required, to both design and model them.

However, if the backgrounds are many and complex, there could be a whole team of environmental designers on board, certainly for movie-length productions. Either way, the environmental modeler has to have skills in creating mood and atmosphere with the settings, giving a realistic and natural feel to the environments, whether they are photo-real or abstract. Consequently, it is important that the director of the film casts his environmental modeler well, as good sets can either make or break a movie.

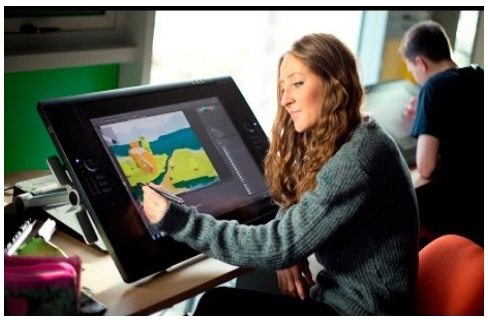
Background Artist (2D)

For me, the background artist, whether they are working in a 2D or 3D environment, is one of the most important members of the animation team. A background fills close to 90 percent of what the audience sees. If the backgrounds appear bad or cheap, the film will appear bad and cheap, regardless of the animation quality. Similarly, if the backgrounds look like a million dollars, then so will the film. Background artists need a fundamental understanding of the animation process but, essentially, the background artist can come from any artistic discipline: book or magazine illustration, comic book art, or even a fine art.

The bottom line is, can the background artist add something to the picture that supports and enhances the animation? If the answer is yes, then that person is a good background artist. Professional background artists can work in many styles and techniques. Traditionally, backgrounds were created with brushes, paints, and paper. Today, digital software can provide artwork that has this look, and much, much more. Consequently, the very best background artists are thoroughly trained in both traditional and digital techniques, the latter being perhaps the most important these days in view of the greater need to produce multiple-layered, 3D real or simulated backgrounds.

Checker (2D)

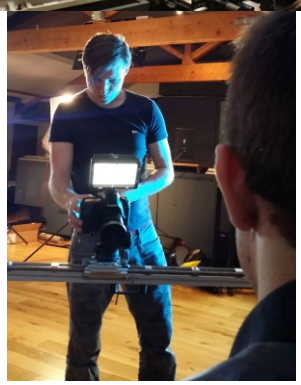
With the great amount of sophisticated animation, effects, background art, and other production elements required in today's digital environment, it is essential that everything is checked before a final commitment to scanning, coloring, and compositing is made. Checkers go through everything related to each scene's production folder and dope sheet to make sure that it is all there and as it should be. This, of course, was as true in the traditional industry as it is today in the digital one. The main exception was that the traditional checker was required to check physical, finished cels before they were sent to the rostrum cameraman.



In these cases, checks were made that the coloring was consistent, that painting errors and splatters did not show outside the required painting areas, and that the cels were smear-free and spotless before being filmed. The checker has to be a patient and meticulous person, with the eyes of a hawk, if his or her work is to be at all reliable. On small-scale productions, a checker's role is not quite so common, as each department can check their own material for much of the time. The picture(top right) are checkers at work.

Scanner/Rostrum Cameraman (2D)

Traditionally, animation artwork was always shot by a highly trained cameraman, using a sophisticated rostrum camera mounted vertically over an animation table and raised or lowered on a sturdy metal tower known as a rostrum. As mentioned earlier, all the animation was colored on different cel layers that were laid over a background, under the camera's lens, and shot frame by frame. The highly-skilled, traditional rostrum cameraman is very much an "endangered species" these days, except in the area of digitally recording artwork and text for film graphic and title sequences.



Nowadays, all the layers are invariably scanned on regular desktop scanners, in line form, then colored, composited, and saved into their various appointed layers within the computer. The scanning operator does not need to be well-trained, but he or she has to be meticulous and organized. Most scanning machines used are the regular office variety, with thin aluminum animation peg bars taped to them, to hold the drawings in the appropriate positions. However, highly sophisticated, animation-dedicated scanners have been developed for the bigger studio set-ups; they automatically scan the drawings in a stack form (like regular batch-copying office Xerox machines) and then digitally align the scanned files with each other by registering the peg holes automatically. This clearly is a huge time-saver and requires even less hands-on involvement on the part of the scanning operator.

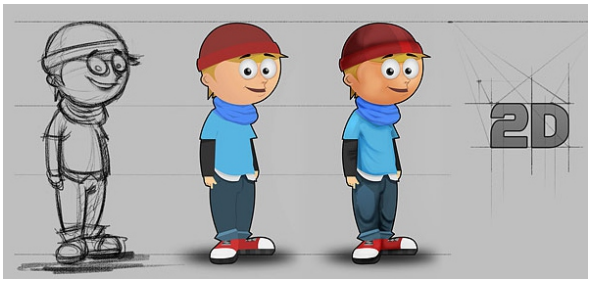
Inker (2D)

In the past, animation drawings were hand inked (traced) onto cels and painted by the coloring department. The inking was initially done using very steady-handed inkers who used fine brush strokes to copy the drawn lines onto the acetate. Later, pen inking was used and eventually Xerox machines were implemented, essentially photocopying the drawings from paper onto cels, using converted office machines that had the heating elements lowered so the cels didn't melt. Today, scanning has replaced most traditional inking processes, since the cleaned-up and inked drawings, prior to scanning, are essentially their equivalent.

Colorist (2D)

Again, in the past when cels were used for producing animation, the colorist was often known as a painter, as what he or she did was paint the appropriate colors onto the backs of the inked cels. The paint was applied on the back of the cel as it gave a much flatter color when seen from the camera point of view and also meant that is was so much easier to not worry about painting over the lines. The kind of paints used had to be opaque to keep the background colors, or other layers of animation underneath, from showing through the coloring. Paints as simple as standard household emulsion paint were used, all the way up to sophisticated, dedicated paints that were much more bright and colorful but exceedingly more expensive.

Digital coloring has eliminated all of that. Now scanned files are viewed on the screen and colored with the click of a mouse. As long as the inked lines enclose the area to be colored, the process takes a mere second or less per color. It becomes time-consuming if there are gaps in the enclosing lines which allow the color to flood out to other areas of the screen. Some paint software can automatically plug those line gaps but, otherwise, the colorist will have to hand-fill the gaps and then fill the area with color.

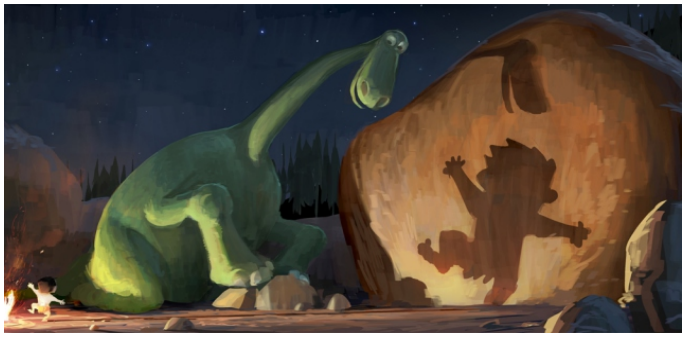


Texturer (3D)

The texturer's job is to create final color and surface textures that will be placed on each 3D character model. The textures have to complement and define the nature (and sometimes the personality) of the 3D model. Indeed, with some low-poly productions, such as those for games and the Web, the textures have to actually substitute for the lack of detailed surface modeling capability. Sometimes, the texturer is responsible for making high-poly characters look more natural or realistic, right down to the dirt, scuffs, and damage on the character's clothing. Even though the outcome of their work is invariably seen three-dimensionally, the bulk of the texturer's work is created in a 2D image editing program such as Photoshop.

Lighting Artist (3D)

As with the texturing artist, the lighting artist is required to give realistic and often subtle effect to the 3D characters and environments. Just like a lighting specialist in live action filming, the lighting specialist in 3D production often has to bring mood, color, and atmosphere to a scene. Consequently, they will need to have an intimate understanding of natural lighting, as well as being technically proficient with most 3D technology. Sample works of lightning artist is shown in the picture(left), taken from a Pixar movie.



Compositor (2D and 3D)

With so many possible elements in modern films, it is necessary for one person to be responsible for combining all these elements. The compositor's job is to bring together all the elements, scene by scene. This may be as simple as adding the animation to a background, or as complicated as combining 2D animation, 3D animation, live-action film, model animation film, and an assorted selection of text and graphics. With many animation software packages, specifically 2D animation software as Anime Studio, ToonBoom Studio and Digicel's Flipbook, basic compositing can be achieved within the program, rarely needing the help of a specialist compositor.

However, with larger, more ambitious and expansive projects, the role of compositor is essential, using desktop technology such as After Effects or even hiring outside post-production houses with expensive state-of-the-art equipment to provide more ambitious compositing work.

Sound Editor (2D/3D)

With all the dialogue recorded, edited, and broken down at the front end of the production, the sound editor's job does not kick in again until after all the animation is complete. At this point, any additional sound elements are created, edited, and merged in with the existing dialogue and new music tracks. The sound editor will supervise all this, through to the final dubbing session, which will result in the production of a finely balanced soundtrack. Final soundtracks are often produced in two separate ways, one with the dialogue track included in it and one that has no dialogue track in it at all (called an M & E track) which is used for foreign language versions of the film.

Often, the sound editor and the production editor are one and the same person, requiring that between their duties at the front and back end of the production, the sound editor will also edit the animatic, cut in the pencil test scenes as they are completed, and then replace these with the final color scenes as they too are completed.

Part 1

Fundamentals of Animation

Laboratory Manual

ZOETROPE GROUP PROJECT

Lab 1.3

Task: Create your own Zoetrope from scratch
Work File: How to make a Zoetrope.mp4

Directions:

1. View the short video How to make a Zoetrope.
2. Make an Inspiration file that contains your plan in making your group project, here list your group members and the materials that you will be needing to complete the project. Include the cost of this project.
3. Record short videos from start-to-finished about this project. Attach these video clips when you present it to the whole class.
4. Present your group project to your class.