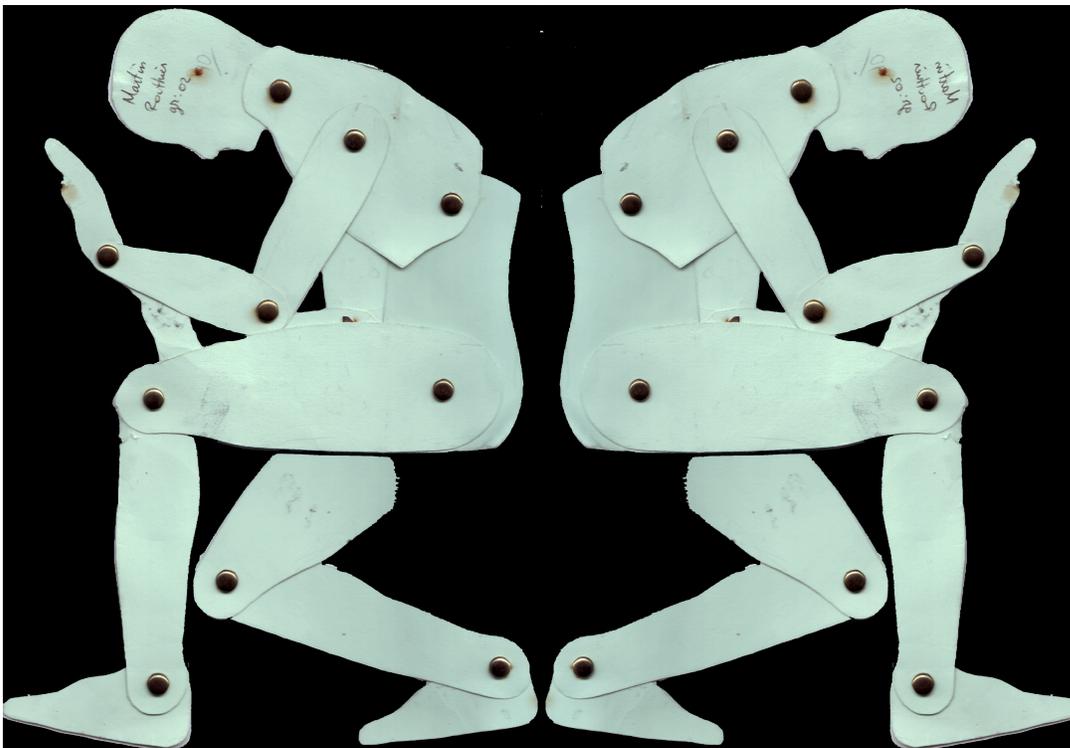


MOVEMENT IN ANIMATION Digital Studio Art



Computer-animated film has gained in precision, flexibility and speed. Its realization is based on a set of hardware and software more accessible and easy to use.

This module will demonstrate the importance of simplifying and developing an evolutionary approach in order to help students better understand the most important element of animation, the "movement". To be fixed on film, the movement must be broken down into stages, and that's the work of the camera.

The National Film Board (NFB), which enjoys an international reputation, has contributed to the evolution of animation worldwide, and has played a prominent role in the evolution of animation throughout Canada, and particularly in Quebec. Animation in Quebec has always been very dynamic and avant-garde to the international mainstream and readily available to the creators of animation imagery. In learning the history of animation, one cannot ignore the work of the pioneers, Evelyn Lambert, Grant Munro, George Dunning, Jim and Billie McKay, who all initiated a profusion of different styles with several famous animations enjoying fully justified status. (e.g. "Cadet Rousselle", George Dunning; or "Neighbors", by Norman McLaren.) The film, "Blinkity Blank", by Norman McLaren, (5 min. And 15 sec, color, 1953), is an example, as well as the animated carvings of Brestislav Pojar, Balablok,(7 min. And 27 sec., Color, 1972).

Particle animation, using sand or other materials that can be used to create images, such as paper clips, erasers, etc. is also used. For example, the fable entitled, "Marriage of the Owl" by Caroline Leaf (7 min., N / b, 1975), was produced with sand, evoking shapes, backgrounds and characters, placed and replaced with fingers between each plug of view. In the film, "In the Line", (10 min. And 18 sec, 1974), Paul Friessen actually drew using the technique of acetates on which there are painted characters and backdrops, representing twenty-four frames per second.

For the movement of human motion, we can refer to the three-dimensional animated film "The Puppet" (Claymation) and "The Sand Castle" Hhoedeman Co (13 min., Color, 1977), as shots are made frame by frame. For this, McLaren invented pixilation in 1949, and later immortalized the technique in "Neighbors" (1952). This technique plays on the time between each shot, as does "Mr. Sharp" by Bernard Andre Longpre and Leduc, (12 min. And 30 sec, color, 1975).

By 1944, Alexander made his first film, alexeieff, with his wife Claire Parker: "The Display of a Pin." His invention is a board of nails, including 240.000 needles which are mobile and close tight against each other. With different pressures pressing the needles down through a raking light, it creates shadows and light, forming the desired image. "The Landscape" is an example by Jacques Drouin (7 min. and 30 sec, n / b, 1976) is a journey into the unconscious and inner life, reflecting a range of varied emotions.

The advent of computer animation then followed in its infancy. In this case, it gave the machine the task of recreating the intermediate steps between the beginning and end of a movement, rather than the facilitator preparing twenty-four steps of shots per second.. "Hunger" by Peter Foldes (7 min. and 30 sec,

n / b, 1976), promotes the use of computers as a new tool to support the creation for the host. "Meta Data", by Peter Foldes, (8 min. and 30 sec, color, 1971) and, "Test", by Bernard Longpre, (4 min. and 57 sec, color, 1965) are examples.

Other accomplishments of the NFB can further trace the evolution of animation. They are still available for teachers at the NFB. A visit to the NFB is another opportunity for teachers who want to show students how to design an animation regardless of the medium. These few references may be used to create animations exploiting different techniques and various media and to promote the production of animation in all forms. The teacher can develop this aspect of the media in regard to experimentation, exploration and research with teams of students in animation image processing. Video cameras and yield tables can also be fabricated at home or elsewhere as they are easily accessible to the student. Some students already have a video camera at home and can overcome the technical requirements of the activity.

WORKSHOP 1

Introduction to Movement in Animation

Objectives

- Explore the concepts of moving images in 2D/3D, and without a computer. The classical approach to animation with computer animation.
- Experiment with the exploration of movement and its components.
- Encourage students to think and build, to discover how to articulate the character.
- Performs the transfer of movement on a computer, captures images, compilation and study of decomposition of the static or dynamic movement.

Suggested Strategies

Discussions with the educator/student related to movement?

It must lead to a logical understanding of the movement by offering various preliminary activities e.g. design of an animated notebook, [flip book] or demonstration with sheets of transparency tracing paper. They can realize

evolution of the movement, and present a short animated film, or video shooting process while referencing previous experiments of students.

- The design of the character: what will he do?
- What will the physical characteristics of the character will be articulate?
- What materials will be available by the teacher to consider the whole project?
- How this character will he articulated?

What materials do we use to make the character?

The teacher suggests that the student devise the representation of the movement, for example, with the construction of a character or an animal cardboard. He asks how the movement will be observed, with its own joints corresponding to those of a human or to an animal? He then reassembles the body parts in order to facilitate the movement.

The teacher also proposes that the student choose an identity of his choice. It could be a figure of history, science fiction, an astronaut, an adventurer, a discoverer, a character from a fairy tale (e.g. prince, ogre, princess)? Subsequently, it can include all the characters created in the framework of a scenario that could be wacky, unusual, unpredictable and surprising even for the whole class. After making the character from paper, cardboard or other opaque or transparent material, the students transfer them to the computer.

Study of movement

Character developed and articulated.



Step 1

Step 2

Step 3

Transfer of the cardboard character in computer graphics

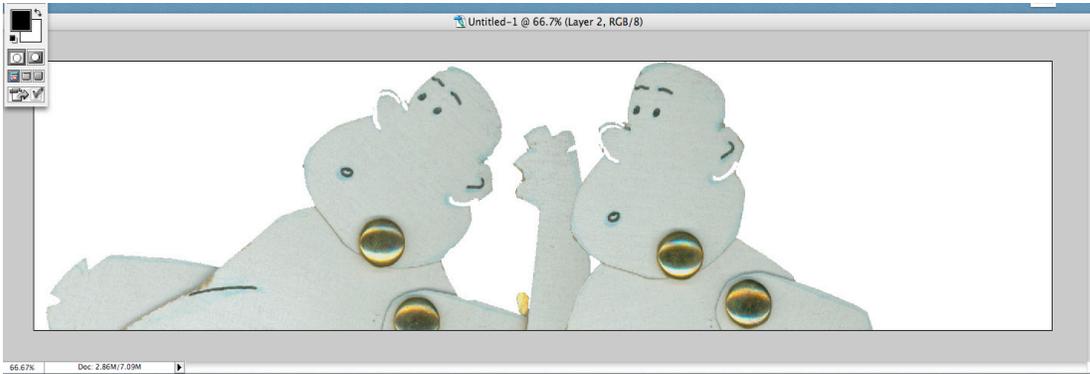
The first step, is to transfer the character on the computer screen using the digitizer; the second, is to move the joints of the character sequentially, in this case, the student combines them with brads. The third step, is to save the images one after the other; and the fourth, is the overlay using image software (e.g. Photoshop). The final step gives rise to a composite image in the sense that the student has combined all the performances into one.

Stages of design and articulation of the student's character.

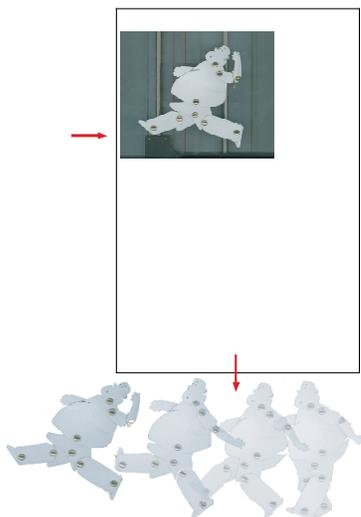
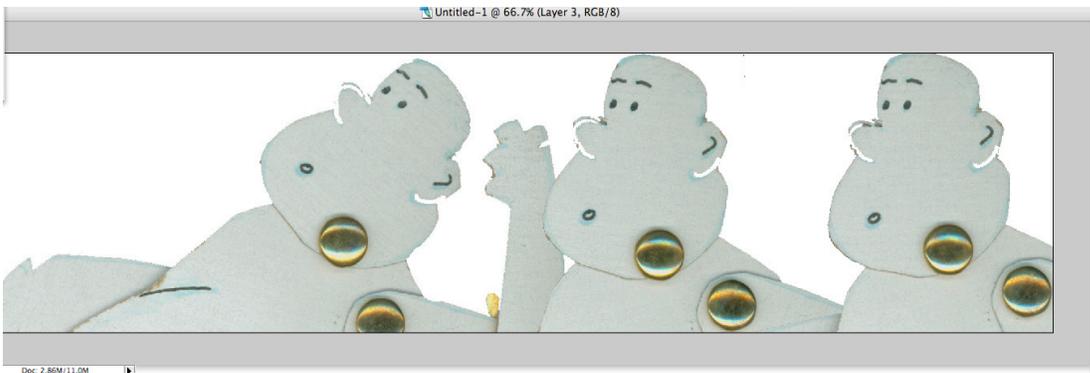


Transfer the character to the computer image by image.

Stage 2



Single composite image all stages(three steps of movement in one image included).



Arrangement of the variants of the original character (above) using the scanner and image processing. This is a single composite image in which all stages of the sequential movement were included (1,2,3,4, steps movement) (see below).

EVALUATION / ASSESSME

The teacher assesses the level of understanding of the movement shown by the student. He estimates the character built, his joints, technology transfer, and, finally, the composite image, rendering the resulting movement of the approach of the student. The manipulation of traditional classroom tools is necessary, such as cutting and assembly of the character. Then, there is the transfer and handling of the scanner and software to transfer, and then the step presentation on the computer screen. A rubric can be adapted to the activity and help clarify the steps to search for understanding of the movement and execution of the character as a student's response to the proposed theme. This would include the contribution of the technical fabrication, the visual language, stage graphics and the message sent by the student.

MATERIALS NEEDED

Accessories and environmental objects in 2D: paper, opaque layer (roll or sheet) and silk color paper, colors, cardboard, trombones, crayons, wax, felt. Charcoal, pastels, watercolor, gouache, chisel, and exacto and various materials (e.g. leather, fabric, etc.) plus a monitor, computer, digitizer, digital cameras and videos and image processing software (e.g. Photoshop, Corel Draw).

WORKSHOP

Covering: Video production of the workshop for students and teachers for evaluation and references / Power Point Presentation / Exercises / Performance/ interactive evaluation / Evaluation / Assessment.