



2010 Regional Skills Canada Competition

Scope Document

Lethbridge College

Thursday, April 29, 2010

EVENT: 3D Character Computer Animation (Teams of Two)*	LEVEL: Secondary
START TIME Check-in: 7:30 – 7:50 a.m. Orientation: 7:50 – 8:00 a.m. Contest: 8:00 – 1:30 p.m. Project Presentation: 1:30 – 2:30	LOCATION: Lethbridge College TE 3217
THEORY EXAM: No	DURATION: 5 hours
WORLDSKILLS TRADE #: 88	REGIONALIZED EVENT: No

GENERAL DESCRIPTION

*The Regional competition has been listed as a team event but individual competitors will be accepted.

Skills Alberta organizers have allocated one spot at the Provincial competition for the gold medalists from the SW regional competition. The Provincial competition is a team event but individual competitors are also accepted. The provincials are scheduled for May 12 & 13 at the Northlands Agricom in Edmonton, Alberta. Travel expenses and preparation for the provincials are the competitor's responsibility. Please see www.skillsalberta.com for details.

Purpose of the challenge:

To evaluate each team's ability, skill and knowledge of animation as they prepare for employment in the animation field.

Skills and Knowledge to be Tested:

Given a project, participants will be challenged to detail and plan the development of a completed story. The competition will focus on the participants' ability to tell a story. By scripting and storyboarding the competitors outline their idea on paper. Competitors will then bring their story to life by creating, animating and compositing the scenes outlined in their storyboard. This represents the animation process.



Project:

Competitors will have five hours to complete the animation portion of the competition. Competitors are expected to bring with them a complete story board and model sheet and follow them to create their project. Competitors will be given a topic to follow and may be as creative as they wish in telling their story.

2010 Topic: 'The Underachieving Mop'

Competition Expectations:

1. Produce a storyboard and character model sheets on paper that sets out their proposed animation following the project provided. Competitors should do this prior to the competition and hand a copy in to the Skills Expert at the orientation on competition day. The final product will be compared to the storyboards.
2. Competitors should note that model sheets **MUST** include front, profile (side), and $\frac{3}{4}$ (perspective) views of the character.
3. Competitors must demonstrate their knowledge by including 6 of the 12 Principles of Animation in their project. See attached.
4. Finished projects should be between 20 – 30 seconds long. Marks will be deducted for projects that are less than 20 seconds or more than 30 seconds in length.
5. Competitors are not required to render their full project. Competitors must render out 3 still frames, one from the beginning, middle and end of their project. Judges will preview the project on the competitors work station for judging.
6. There must be an obvious beginning and end to the presentation. This could be through the use of the first frame being black or titling.
7. A limited library of music and sound effects will be provided for use. Competitors will also be able to record their own sounds using a microphone (competitors must supply own microphone – USB or 3.5mm). No other recorded sounds will be permitted.
8. The teams will work independently. Instructors will give no assistance and are not allowed in the competition area.
9. Teams will prepare a presentation to the judges (maximum 5 minutes). The presentation will cover storyboard and character design and the planning and execution process. The schedule of the presentation will be approximately as follows:
 - Presentation of products (storyboard, model sheets, and animation)
 - View animation
 - Questions from judges
 - Judges' evaluation



RELATED CAREER AND TECHNOLOGY STUDIES MODULES

Descriptions of all modules are located at the following website:

<http://www.education.gov.ab.ca/cts/>

EQUIPMENT & MATERIALS

Equipment and Materials supplied by Committee:

- 2 Workstations per team
- Hardware Requirements – Core2Duo (or better) (2+ GHz) compatible computer fitted with SVGA 19 inch monitor and optical mouse w/wheel, Video: 128 MB RAM OpenGL video cards. System memory: 1 GB RAM.
- Operating System - Windows XP Professional (not Vista)
- Software: Compositing software will be Macromedia Flash CS4, Maya 2009, Adobe Premiere Pro, Adobe After Effects. Graphic Software Adobe Photoshop CS. Viewing software will be Quicktime Pro, VLC Media Player and Windows Media Player.
- No external support programs, plug-ins, or documentation (other than those found in the final shipped version of the software) may be used.
- Image input devices (scanner and digital camera) provided for all to access and share.
- Standard storyboard and model sheets (see below)

Equipment and Materials competitors must supply:

Teams **ARE REQUIRED** to contact the technical chair by **April 15th, 2010** to advise the Committee what software they will be using **if it is not listed above**. Due to the nature of installing software, competitors should be prepared to use the software provided by the committee if installing their desired software is unsuccessful.

- If students choose to listen to music throughout the competition, all CDs brought into the competition area must be commercially produced. Data CDs, portable storage devices, and mp3 players are not allowed.
- Headphones and microphones
- Pencils and erasers



JUDGING CRITERIA

POINT BREAKDOWN / 1000 TOTAL

The final animations from each team will be viewed and assessed individually by the judge. In the event of a tie judges will be asked to confer and come to a consensus on winners.

Storytelling /250

- Clarity of message (storyboard demonstrates all elements to be communicated visually to the audience)
- Storyboard uses industry standard symbols and terminology as provided in the legend.
- Final presentation illustrates storyline planned and outlined in storyboards.
- Methods chosen (ex. Camera shots, effects) and outlined on the storyboard complement the storyline.
- Storyline illustrates the theme provided in a creative and original manner.

Character design /250

- Model sheet reflects front, side, $\frac{3}{4}$ (perspective), and back views of the character.
- Quality of individual characters (structure, proportions and appeal)
- Contrast between each character helps to emphasize personality traits in the main character.
- Each character's look and style is relevant to the story.

Aesthetics /250

- Effective use of colours
- Shading, contrast, and shapes create desired mood
- Effective use of sound
- Unity of style amongst the characters, environment and props

Animation /250

- Staging: relationship between the camera and the character.
- Effective application of animation principles such as anticipation, exaggeration and secondary motion and the forces that act upon the characters and their environment.
- Movement is fluid and convincing
- Timing of the story: obvious beginning and ending
- Acting: expression, effective posing, ability to provoke empathy and emotion in the audience.



IMPORTANT GENERAL INFORMATION

Tie Breaking Procedure

In the event of a tie judges will be asked to confer and come to a consensus on winners.

Clothing Requirements

Competitors should wear casual office attire.

SCHEDULE (tentative)

*this schedule is subject to change the day of competition

7:50	Students are escorted from check-in to contest location
7:50	Orientation
8:00	Competition begins
11:45	Lunch Break – lab locked for 30 minutes
12:15	Competition resumes
1:30	Project time ends – students will exit room Competitors will present to the judges (presentation order will be drawn randomly)
3:30	Awards Ceremony (gymnasium) – open to the public

COMMITTEE MEMBERS

Tanya Weder	Lethbridge College
Tyler Wall	Lethbridge College
Gavin Brinsmead	Lethbridge College
Don Reichart	Catholic Central High School
Darren Atwood	Kate Andrews High School
Reed Spencer	Willow Creek Composite High School
Deanna Gonnely	Career Transitions

Detailed project information is attached.



12 PRINCIPLES OF ANIMATION

THE 12 BASIC PRINCIPLES OF ANIMATION Paraphrased from the "Illusion Of Life" by Frank Thomas & Ollie Johnston.(pp.47-69) Look these up and read the original version for a complete understanding.

1. SQUASH AND STRETCH

This action gives the illusion of weight and volume to a character as it moves. Also squash and stretch is useful in animating dialogue and doing facial expressions. How extreme the use of squash and stretch is, depends on what is required in animating the scene. Usually it's broader in a short style of picture and subtler in a feature. It is used in all forms of character animation from a bouncing ball to the body weight of a person walking. This is the most important element you will be required to master and will be used often.

2. ANTICIPATION

This movement prepares the audience for a major action the character is about to perform, such as, starting to run, jump or change expression. A dancer does not just leap off the floor. A backwards motion occurs before the forward action is executed. The backward motion is the anticipation. A comic effect can be done by not using anticipation after a series of gags that used anticipation. Almost all real action has major or minor anticipation such as a pitcher's wind-up or a golfers' back swing. Feature animation is often less broad than short animation unless a scene requires it to develop a characters personality.

3. STAGING

A pose or action should clearly communicate to the audience the attitude, mood, reaction or idea of the character as it relates to the story and continuity of the story line. The effective use of long, medium, or close up shots, as well as camera angles also helps in telling the story. There is a limited amount of time in a film, so each sequence, scene and frame of film must relate to the overall story. Do not confuse the audience with too many actions at once. Use one action clearly stated to get the idea across, unless you are animating a scene that is to depict clutter and confusion. Staging directs the audience's attention to the story or idea being told. Care must be taken in background design so it isn't obscuring the animation or competing with it due to excess detail behind the animation. Background and animation should work together as a pictorial unit in a scene.

4. STRAIGHT AHEAD AND POSE TO POSE ANIMATION

Straight ahead animation starts at the first drawing and works drawing to drawing to the end of a scene. You can lose size, volume, and proportions with this method, but it does have spontaneity and freshness. Fast, wild action scenes are done this way. Pose to Pose is more planned out and charted with key drawings done at intervals throughout the scene. Size, volumes, and proportions are controlled better this way, as is the action. The lead animator will turn charting and keys over to his assistant. An assistant can be better used with this method so that the animator doesn't have to draw every drawing in a scene. An animator can do more scenes this way and concentrate on the planning of the animation. Many scenes use a bit of both methods of animation.

5. FOLLOW THROUGH AND OVERLAPPING ACTION

When the main body of the character stops all other parts continue to catch up to the main mass of the character, such as arms, long hair, clothing, coat tails or a dress, floppy ears or a long tail (these follow the path of action). Nothing stops all at once. This is follow through. Overlapping action is when the character changes direction while his clothes or hair continues forward. The character is going in a new direction, to be followed, a number of frames later, by his clothes in the new direction. "DRAG," in animation, for example, would be when Goofy starts to run, but his head, ears, upper body, and clothes do not keep up with his legs. In features, this type of action is done more subtly. Example: When Snow White starts to dance, her dress does not begin to move with her immediately but catches up a few frames later. Long hair and animal tail will also be handled in the same manner. Timing becomes critical to the effectiveness of drag and the overlapping action.



6. SLOW-OUT AND SLOW-IN

As action starts, we have more drawings near the starting pose, one or two in the middle, and more drawings near the next pose. Fewer drawings make the action faster and more drawings make the action slower. Slow-ins and slow-outs soften the action, making it more life-like. For a gag action, we may omit some slow-out or slow-ins for shock appeal or the surprise element. This will give more snap to the scene.

7. ARCS

All actions, with few exceptions (such as the animation of a mechanical device), follow an arc or slightly circular path. This is especially true of the human figure and the action of animals. Arcs give animation a more natural action and better flow. Think of natural movements in the terms of a pendulum swinging. All arm movement, head turns and even eye movements are executed on an arcs.

8. SECONDARY ACTION

This action adds to and enriches the main action and adds more dimension to the character animation, supplementing and/or re-enforcing the main action. Example: A character is angrily walking toward another character. The walk is forceful, aggressive, and forward leaning. The leg action is just short of a stomping walk. The secondary action is a few strong gestures of the arms working with the walk. Also, the possibility of dialogue being delivered at the same time with tilts and turns of the head to accentuate the walk and dialogue, but not so much as to distract from the walk action. All of these actions should work together in support of one another. Think of the walk as the primary action and arm swings, head bounce and all other actions of the body as secondary or supporting action.

9. TIMING

Expertise in timing comes best with experience and personal experimentation, using the trial and error method in refining technique. The basics are: more drawings between poses slow and smooth the action. Fewer drawings make the action faster and crisper. A variety of slow and fast timing within a scene adds texture and interest to the movement. Most animation is done on twos (one drawing photographed on two frames of film) or on ones (one drawing photographed on each frame of film). Twos are used most of the time, and ones are used during camera moves such as trucks, pans and occasionally for subtle and quick dialogue animation. Also, there is timing in the acting of a character to establish mood, emotion, and reaction to another character or to a situation. Studying movement of actors and performers on stage and in films is useful when animating human or animal characters. This frame by frame examination of film footage will aid you in understanding timing for animation. This is a great way to learn from the others.

10. EXAGGERATION

Exaggeration is not extreme distortion of a drawing or extremely broad, violent action all the time. It's like a caricature of facial features, expressions, poses, attitudes and actions. Action traced from live action film can be accurate, but stiff and mechanical. In feature animation, a character must move more broadly to look natural. The same is true of facial expressions, but the action should not be as broad as in a short cartoon style. Exaggeration in a walk or an eye movement or even a head turn will give your film more appeal. Use good taste and common sense to keep from becoming too theatrical and excessively animated

11. SOLID DRAWING

The basic principles of drawing form, weight, volume solidity and the illusion of three dimension apply to animation as it does to academic drawing. The way you draw cartoons, you draw in the classical sense, using pencil sketches and drawings for reproduction of life. You transform these into color and movement giving the characters the illusion of three-and four-dimensional life. Three dimensional is movement in space. The fourth dimension is movement in time.



12. APPEAL

A live performer has charisma. An animated character has appeal. Appealing animation does not mean just being cute and cuddly. All characters have to have appeal whether they are heroic, villainous, comic or cute. Appeal, as you will use it, includes an easy to read design, clear drawing, and personality development that will capture and involve the audience's interest. Early cartoons were basically a series of gags strung together on a main theme. Over the years, the artists have learned that to produce a feature there was a need for story continuity, character development and a higher quality of artwork throughout the entire production. Like all forms of story telling, the feature has to appeal to the mind as well as to the eye.

Reference:

<http://www.animationtoolworks.com/library/article9.html>

Team #: _____ Written By: _____ Title: _____ Pg. _ of _

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Action	Action	Action
Sound	Sound	Sound
Notes	Notes	Notes

STORYBOARD SYMBOLS

Camera Movements		Character Movements	
	Racking		Tilt Up
	Zoom Out		Tilt Down
	Zoom In		Pedestal Down
	Pan Right Pan Left		Pedestal Up
	Dolly In		Track Right Track Left
	Dolly Out		Turning Right Turning Left
			Moving Right Moving Left
			Moving Down Moving Up



MODEL SHEETS

Front

Side

Back

Perspective