

Traditional Animation Glossary of Terms , compiled by David Nethery

Online I notice a lot of confusion and imprecision of terminology when discussing traditional hand drawn animation , so I thought it would be useful to post a reference document with a glossary of commonly used terms .

First, let's define **Animation**:

Animation - (*never “*Animations*”) - - The act, process, or result of imparting life, interest, spirit, motion, or activity. - The quality or condition of being alive, active, spirited, or vigorous. - The art or process of preparing animated cartoons. - An animated cartoon : A series of drawings that bring inanimate objects and characters to life.

*Animation is an “**uncountable noun**” , therefore it does not have an extra “s” added for “*Animations*”. Unlike countable nouns, uncountable nouns are substances, concepts, etc. that we cannot divide into separate elements. We cannot "count" them. For example, we cannot count "milk". We can count "bottles of milk" or "litres of milk", but we cannot count "milk" itself , so for example , we do not speak of “bottles of milks” . Or another example is "music" ... we don't speak of "musics" . Neither would we speak of "animations" , but rather animation.

12 Principles of Animation - The **Twelve Basic Principles of Animation** were codified by the Disney animators Ollie Johnston and Frank Thomas in their landmark 1981 book “**Disney Animation: The Illusion of Life**”. Johnston and Thomas in turn based their book on the work of the leading Disney animators from the 1930s onwards. The main purpose of the principles was to produce an illusion of characters adhering to the basic laws of physics, but they also dealt with more abstract issues, such as character appeal and showing the character's emotional state to create believable character acting. Many have referred to “The Illusion of Life” as the “*Bible of animation.*” Though originally intended to apply to traditional, hand-drawn animation, the principles still have great relevance in today's more prevalent computer animation.

<http://twelve-principles-of-animation.blogspot.com/>

See the link below to Malene Newman's website , which has a useful glossary of terms used in Traditional Animation :

http://www.malanenewman.com/glossary_animation_cartooning.html

The following is adapted from Eric Goldberg's book "[Character Animation Crash Course](#)" (highly recommended) -

Definition of Animation Terms , by Eric Goldberg -

Accents -The parts of the soundtrack that are louder or more stressed, which should be indicated in the animation. In dialogue, it can be louder parts of words or words that carry emotional stress; in music, it can be major beats or particularly present instruments.

Anticipation - The smaller preparatory action that precedes a major action, used to show that a character must physically prepare to perform an action or gesture.

Arcs - The visual 'path-of-action' of an object or character is called an arc. This could be the trajectory of a bouncing ball or an arrow shot through the air , the flow of the arms swinging as a character walks, the path of an arm moving to grasp something or to point at something, the gentle downward curve of a head turning from side to side. Arm and leg movements, head turns , and even subtle examples like eye movements or the curve of a mouth movement dialogue animation all move in arcs

Attitude Pose -A pose that expresses, through the entire body, what a character is thinking and feeling.

Attitude Walk - A walk that expresses, both through poses and movement, how a character feels.

Background -The painted (usually) scene against which the full-color characters perform in a finished scene. ("*BG*" for short.)

Breakdown - The initial drawing or position made between two keys, which defines how a character transitions from one idea to the next. ("BD" for short. The breakdown drawing numbers are underlined on the animation drawings . Keys/Extremes are circled , Breakdowns underlined, Inbetweens are not circled or underlined.)

Boil - The slang term used for the evident flickering or jittering of drawings when a scene is run at speed, which results when lines and forms have not been drawn carefully enough to follow through from one drawing to the next. [as a rule "boiling" is something to be avoided , although there are styles where the drawings have intentional line boil, such as the much imitated [R.O. Blechman "squiggly line" style](#) , or a show such as Danny Antonucci's "Ed, Edd, n' Eddy" . But don't try to excuse sloppy drawing which has excess boiling by saying : "*Well, that's just my style, y'know ?*"]

Cel - Short for celluloid, the flammable material on which animation drawings were inked and painted. Replaced in later years by non-fire-hazardous acetate, the term is still in common usage (as in "*held cel*"), although almost all hand-drawn animation is now digitally inked and painted . [in programs such as TVPaint or Toonboom Harmony]

Clean-Ups -The drawings in an animation scene that are refined for final inking or scanning, usually made by placing a new sheet of paper over the rough and perfecting both the linework and the character nuances. In traditional animation today, these are the drawings the audience sees on the screen.

Cushion-Out and Cushion-In - The drawings that accelerate out of a pose, spaced progressively farther apart (so the action does not start abruptly), and decelerate into the following pose, spaced progressively closer together (to complete the action with a smooth settling-in) . Also known as "Slow-Out and Slow-In " or "Ease-Out and Ease-In" .

Drag - The drawing of action that indicates a portion of a character lagging behind, used to create more fluidity in the perceived movement.

Eccentric Action - Specialized movement within an action that cannot be articulated through normal inbetweening. This can include leg positions in a walk or run, mouth positions, hand gestures, and elaborate movement on the entire body.

Exposure Sheet - ("*X-sheet*" for short.) The bible of a scene in hand-drawn animation, showing the timing, the dialogue frame-by-frame, camera and fielding information, the number of cel levels required, and how many frames each drawing should be exposed.

Extreme - A key drawing or pose that is the most exaggerated or dynamic point of a particular action. [often used interchangeably with the term "*Key*".]

Favoring - Making an inbetween position that favors either the position directly before it or after it, instead of making it directly in the center.

Foot (Footage) - Unit by which 35mm film is measured and exposure sheets are subdivided. 1 foot = 16 frames, thus 1.5 feet = 24 frames, or 1 second of screen time. There are 90 feet of film per minute of screen time. [As animation (including hand drawn) has shifted from being analog film based, to digital, many people now speak in terms of seconds, not "feet", of animation. See Gene Deitch's article: ["The Great Footage Fallacy"](#)]

Film Grammar - The language of film making, comprised of different types of shots, staging and editing principles, and scene transitions, and how they are used by filmmakers to help tell a story.

Follow-Through - The natural elaboration of an action that shows how one part leads organically to the next until the action is resolved.

Frame - One single picture, usually equaling 1/24th of a second in the cinema, whether film or digital projection is used. 24 frames = 1 second of screen time; 16 frames = 1 foot. Because of differing electrical systems around the globe, some altered frame rates occur on television broadcasts. U.S. NTSC television runs at 60 Hz per second, so some animation done for television is timed to 30 frames per second (fps), although most is still produced at 24 fps and converted

electronically (using the “[3:2 Pulldown](#)” system) . The PAL video system in Europe is based on a 50Hz per second cycle, so animation is timed for 25 fps.

Held Cel - Portion of a character that is not moving and is drawn onto its own cel level, used to avoid redrawing the non-moving part over a series of frames.

Inbetween - A drawing or position made in a scene that comes between the keys (extremes) and breakdowns. At times they can be right in the middle; at other times they can favor either the earlier or the later position.

Inbetween Chart - Chart on a key drawing that indicates both the spacing of the inbetweens and the order in which they are to be drawn up until the next key.

Keys - The important drawings or poses in a scene that establish the basic tentpoles of the movement and performance. [often used interchangeably with the term “*Extreme*” . For an interesting discussion on the subtle distinction between the terms “Key” and “Extreme” , see Richard Williams’s “The Animator’s Survival Kit” , page 57 - 60 and page 64 - 67 . This is an interesting distinction , but most animators tend to use the terms key and extreme as interchangeable.]

Layout - The setting in which the animated action takes place, indicating sizes of characters in relation to their background, perspective, camera position and movement, major positions of characters within the scene, lighting, and composition of the shot.

Limited Animation - Animation with a reduced number of drawings for either stylistic or economic reasons, most commonly seen in television cartoons.

Line of Action - The first line indicated in a pose, showing the basic overall posture, prior to adding the rest of the details.

Lip-Sync - The animation of lip and mouth shapes in synchronization to the number of frames indicated for each dialogue sound on the exposure sheets.

Mass - A character's personal dimensionality ; what his shapes look like in three dimensions, moving around.

Moving Hold - A minimal amount of movement used to keep a character alive while still communicating a strong pose or attitude. Also known as a "Glorified Pose".

Ones (1's) - The exposure of drawings or positions for one frame each; there would be 24 drawings on ones for a second of screen time.

Overlap -The actions that indicate that not all parts of a character arrive at the same time, and can go past the point of arrival and settle back. Used to indicate weight, movement of clothing, hair, etc. Pantomime - An animation scene that has no dialogue, in which a character's thoughts and emotions are expressed entirely through his poses, expressions, and movement.

Partial - A rough animation drawing that only includes the eccentric actions (lip sync, leg positions, a shut or partially shut eye), leaving the remainder to be done as a straight inbetween (usually by an assistant animator or rough inbetweeners).

Passing Position - In a walk, the intermediate pose in which one leg is passing in front of the other.

Phrasing - The process of containing a sentence of dialogue within an organic pattern of movement.

Pose-to-Pose - The method of animating by establishing key poses first, and then going back in to complete the breakdowns and inbetweens.

Recoil - The after-effect of an abrupt stop, where a character (or parts of him) go past the eventual final pose and settle back into it. [sometimes called "*Overshoot and Settle*"]

Roughs - The drawings in an animation scene made prior to clean-up, usually associated with the animator's first pass of realizing the movement and performance.

Secondary Action - Action animated in addition to a major action, used to show nuance within the main idea. For example, a major action could be a character settling into an impatient pose; while the *secondary action* could be the character tapping his foot impatiently to a faster rhythm.

Silhouette - The overall shape of a pose, which should read clearly even when the pose is blacked in without its internal details.

Spacing - The process of determining how far apart the positions should be from one another, based on the knowledge that the farther apart, the faster the action, the closer together, the slower the action.

Stagger - The mechanical manipulation of frames to achieve a vibration on screen.

Staggered Timing - Parts of a scene or piece of animation that do not occur at the same time. For example, several characters doing the same dance step could be on staggered timing (one frame earlier, two frames later, etc.) in order for the group action to appear more naturally on the screen . [aka “off-set timing”.]

Staging - The positioning of characters in a scene for maximum emotional content and clear readability of actions.

Storytelling Drawings - The drawings in a scene that succinctly communicate to an audience the important ideas expressed through the action.

Straight-Ahead - The technique of animating in order, from the beginning to the end of a scene, to achieve a natural flow from one drawing to the next. Not as easily controlled as the pose-to-pose method, straight-ahead animation requires strict attention to the maintaining of volumes and sizes, but can result in very fluid looking movement.

Strobing - The unwanted effect of a vibration across the screen, usually associated with vertical shapes perpendicular to the horizon. Strobing would occur if a character were animated on twos while the camera panned on ones - almost the

optical version of a "stagger." The way to fix this problem is to put in the single inbetweens on ones for the duration of the pan.

Successive Breaking of Joints- The term first coined by animator Art Babbitt to describe how a character can move fluidly based on anatomy. You can show a "wave" action in a character's arm, for example, by having the arm travel downward, "breaking" at the elbow, joint and then successively "breaking" at the wrist joint as the rest of the arm catches up, and then breaking in the opposite direction at elbow and wrist on the way back up.

Texture - The appearance of differences in timing, spacing, pacing, and emotional range within an animation scene, in order to keep the scene interesting and believable to an audience.

Thumbnails - A series of quick sketches (usually small, thus "thumbnail") used to figure out major poses and storytelling drawings in a scene.

Tie-Downs - The drawings made as a secondary stage in rough animation that further refine the expressions and details throughout a scene, usually made by an animator on top of his own initial roughs.

Timing - The process of determining how long each drawing or position should be on screen, based on the knowledge that 24 frames equal one second of screen time.

Twos (2's) - The exposure of drawings or positions for two frames apiece; there would be twelve drawings on twos for one second of screen time.

Traceback - Portion of a character that is held for several frames, but "traced back" to an original source drawing over the remaining amount of the hold. This is used to keep a character feeling alive, rather than separating the held portion onto a separate level.

Volume - The amount of space a character takes up; even if a character is squashed, stretched, or distorted, his volume should remain consistent.

Weight - Indication of a character's poundage, shown through the timing, overlap, and style of movement.