

Principle of Animation

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Abstract

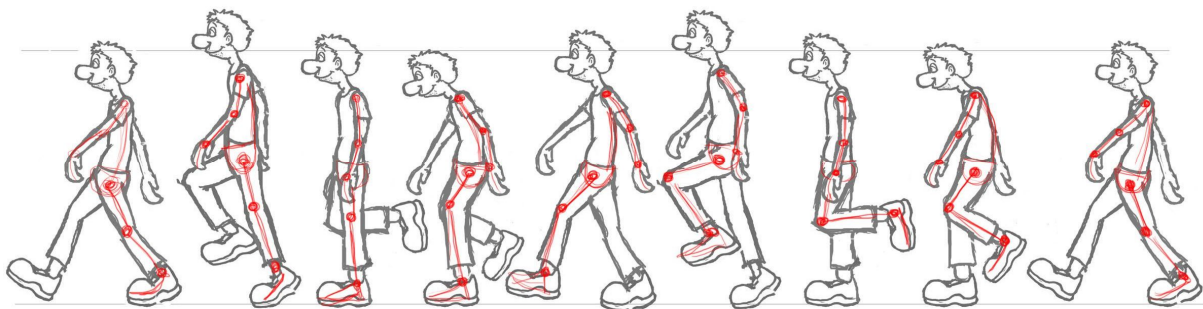
Animation is basically a graphical representation of our life. To create the animation just like our real life, there are basically 12 Animation Principals. With the help of this principals will become more realistic, easy and smooth. By this documentation we are going to learn these principals uses and advantages.

Keyword: Stretch and Squash; Staging; Straight Ahead Action and Pose to Pose; Follow through and Overlapping; Slow in Slow out;

Introduction

Animation is a very common word to all of us, which can be simply defined as the process through which we can create any movement on our drawn character or add motion by static pictures. This word has arrived from the word Anima which means soul or giving live to a non-living object.

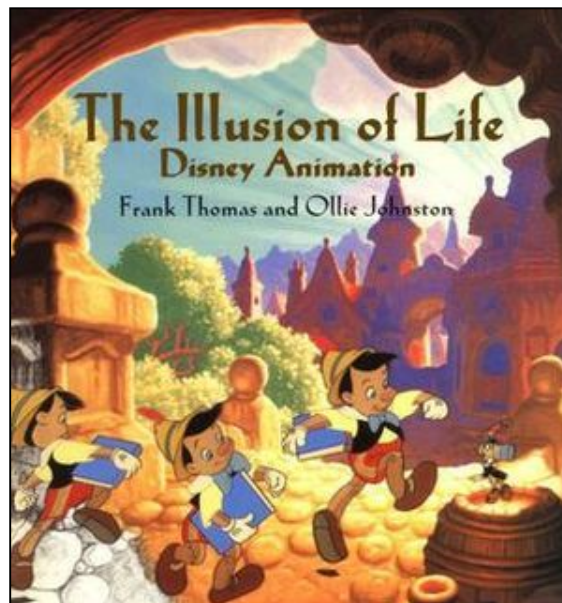
Animation is used to display such things that we can't do in our real life or it can't be shooting by live action.



We all are familiar with cartoons and animation movies. But today we are talking about the back story of the very known characters like "Tom & Jerry" or "Cinderella".



When we see any movement of cartoon characters, we see the same to same movement which we see in our real life. For that purpose, we should follow some principals which are commonly known as "**12 Principle of Animation**". In our real life we move based on that principals but generally we ignore it. But in 1981 Disney animator Ollie Johnston and Frank Thomas developed these principals of animation in their book "The Illusion of Life".



Principles of Animation-

- Stretch and Squash
- Anticipation
- Staging
- Straight Ahead Action and Pose to Pose

- Follow through and Overlapping
- Slow in Slow out
- Arc
- Secondary Action
- Timing
- Exaggeration
- Solid Drawing
- Appeal

1. Stretch & Squash

This is one of the important principles of animation. It creates the flexibilities of materials in our animation. Through this principle we can understand the type of materials in our animation. This principle shows the weights and flexibilities of an object in our animation.



Fig. 1: Application of Stretch and Squash:

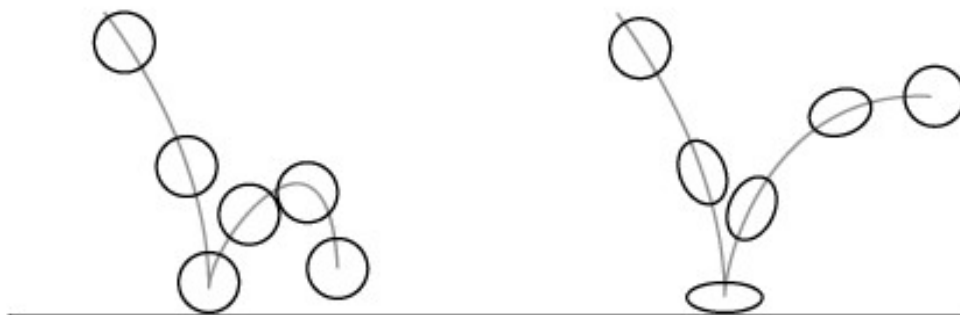


Fig. 2: Without Stretch and Squash | With stretch and Squash



Fig. 3: Human Face



Fig. 4: Human body movement

2. Anticipation

This is one of the most important principles of animation. This is the preparation part of any action in our animation. It prepares the audience for any action in our animation.

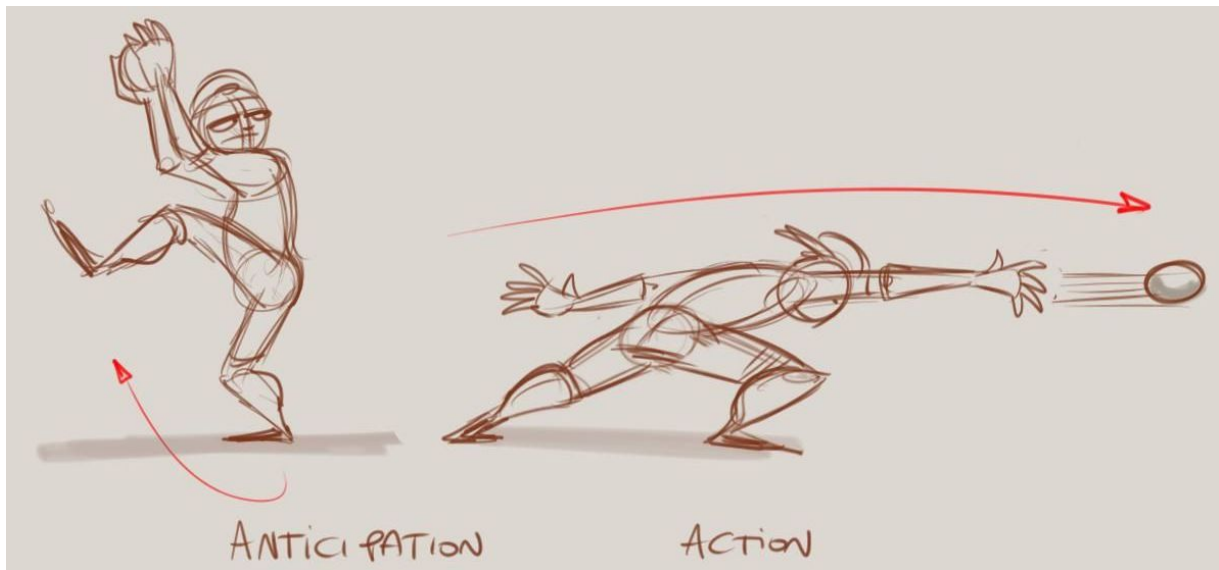
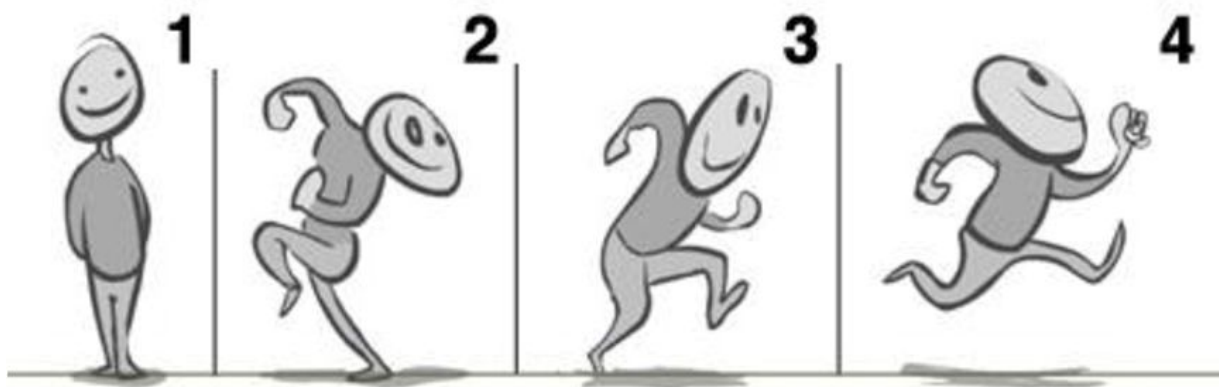


Fig.5: Anticipation and Action



3. Staging

This is another principle of animation. It describes the place where our action will take place. It defines the composition. It has to be presented properly so that our composition will look good and eye soothing.



4. Straight Ahead Action and Pose to Pose

Straight Ahead Action and Pose to Pose refers to the two drawing processes applied by animators. Straight Ahead Action is the drawing out of a scene frame by frame from start to finish, whereas in Pose to Pose the action is planned out by the animator using a few key frames and then the intervals are filled in.

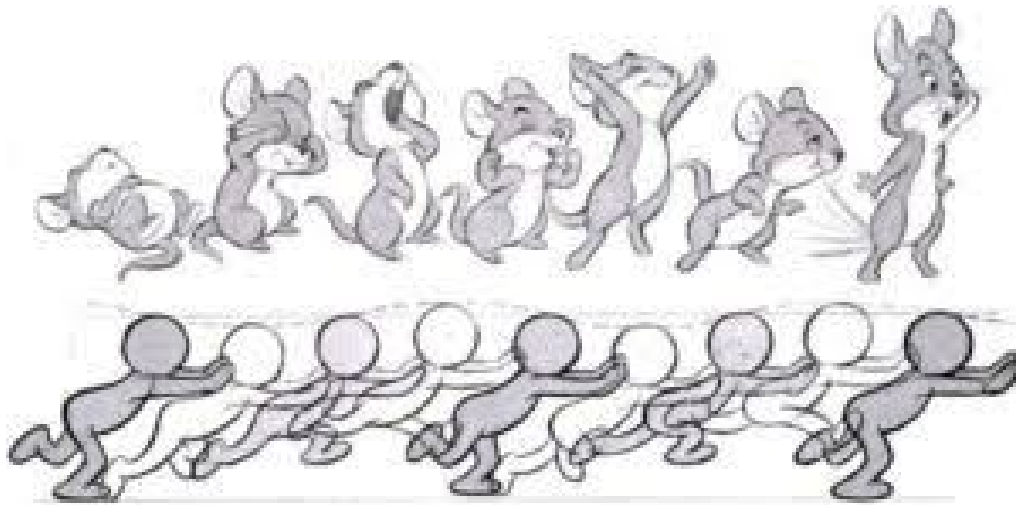


Fig. 6: Straight ahead action

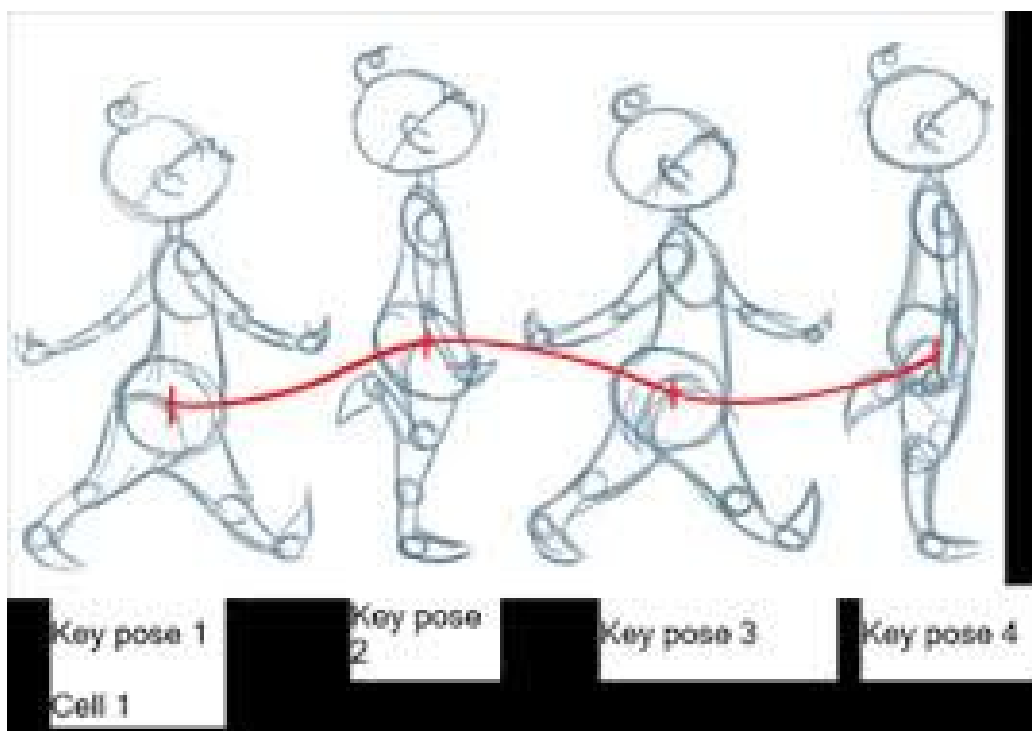


Fig. 7: Pose to pose

5. Follow Through & Overlapping

Follow through is the action which is done when any other action is going on and the second action follow the primary action. In one word follow through is one type of secondary action (details given in Secondary Action Part) which follow the primary action.

Overlapping any other secondary action which also going on with the primary action but in different way and direction also.



Fig. 8: The movement of tail is follow through



Fig. 9: The back cloth flying opposite of the person's movement so this is a Overlapping

6. Slow in Slow out

This is another principle of animation. It defines that when an action will start and end the speed will decrease and in the middle position of the action the speed will be increase.

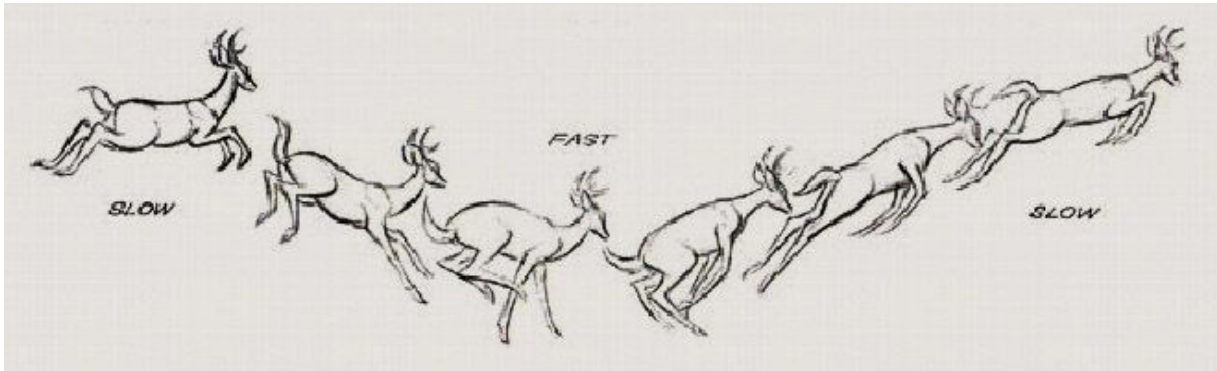


Fig. 10: Without Slow in Slow out



Fig. 11: With slow in slow out

7. Arc of Motion

This is one of the most important principles in animation. It defines that any action will happen maintaining an arc. Any movement of living elements or objects are maintaining the arc.

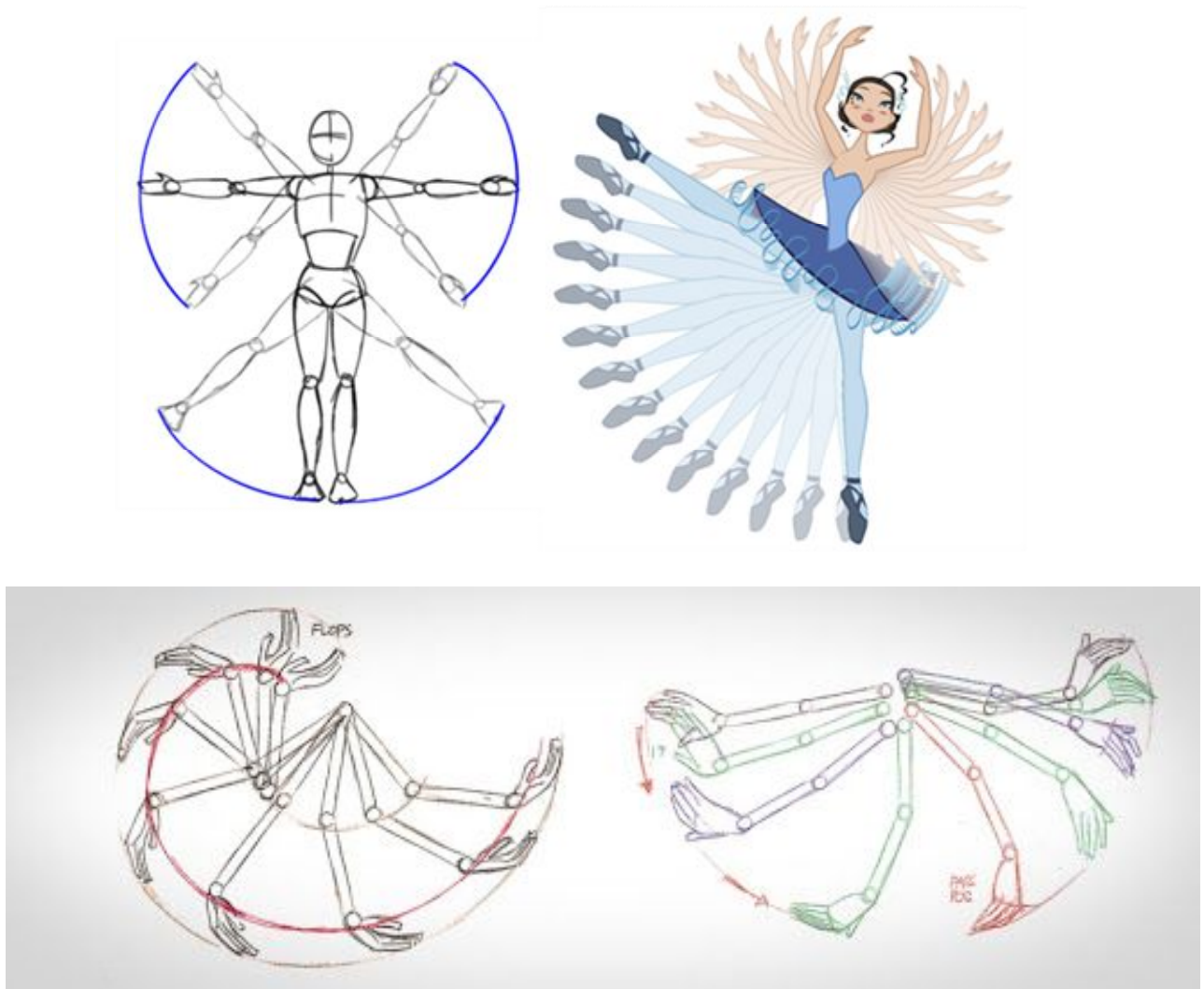


Fig. 12: Arc of Motion

8. Secondary Action

This is the principles which defines another action along with the main action. It is a supporting action which creates the animation composition better.

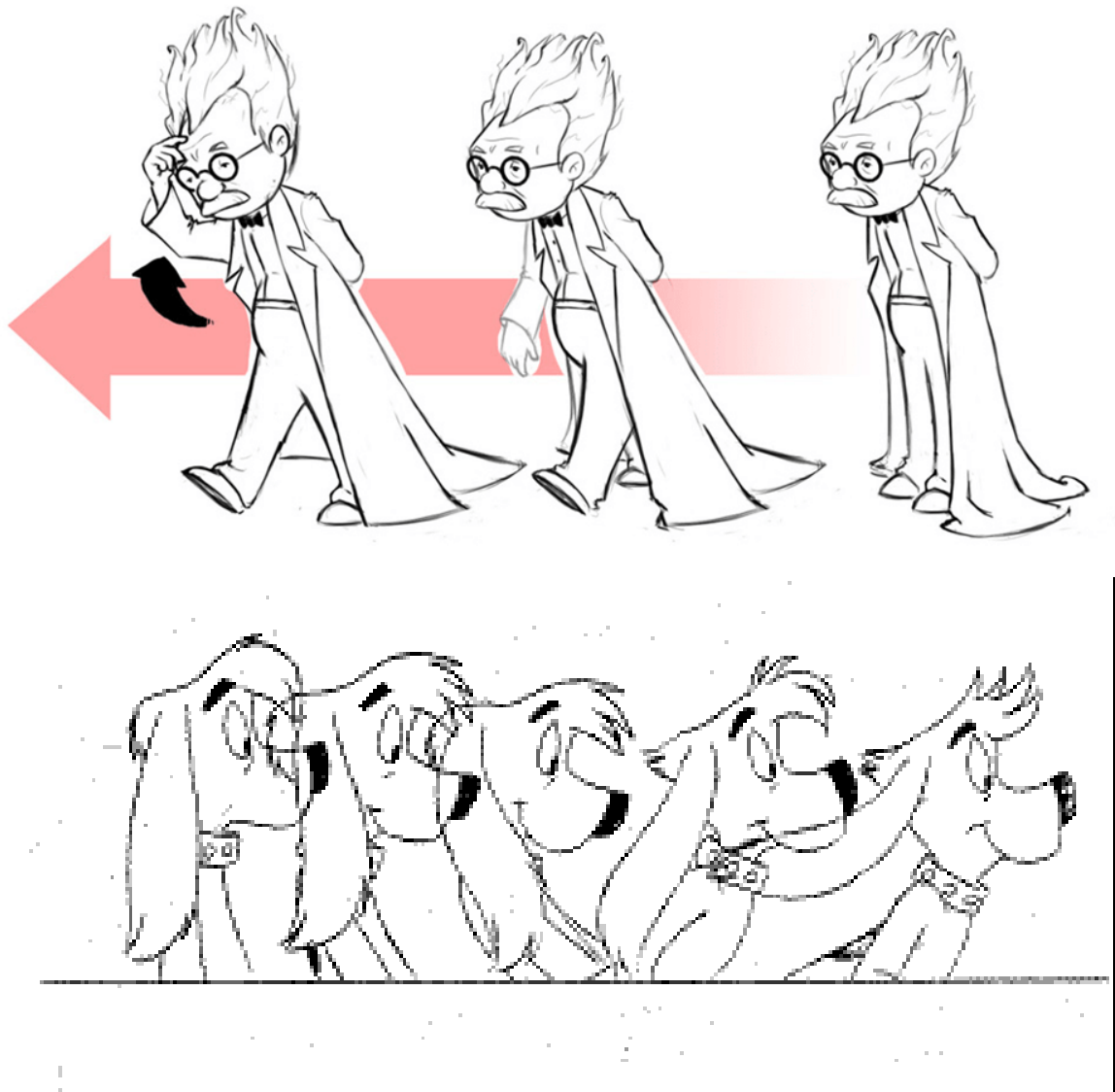


Fig 13: Secondary Action

9. Timing

The timing comprises many things in animation. It is the duration of an action.

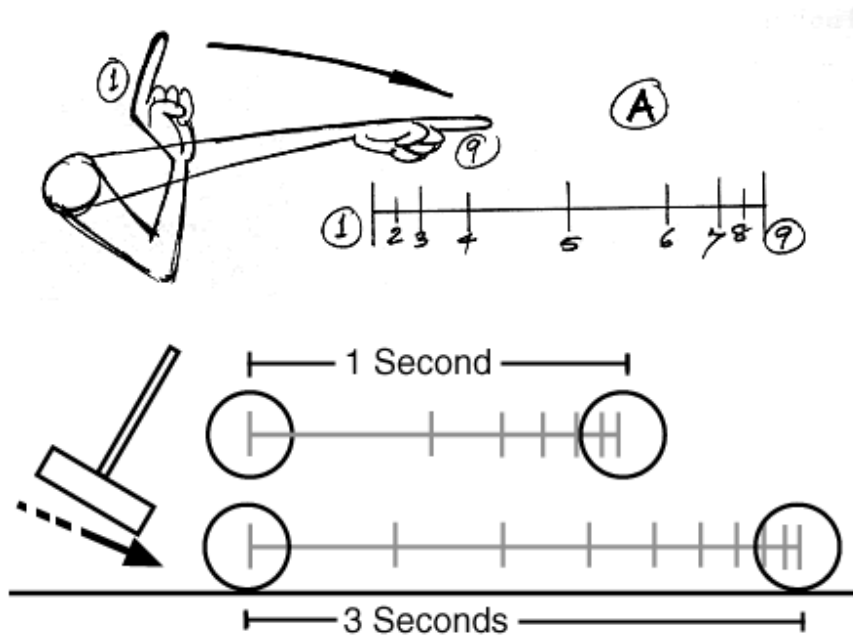


Fig. 14: Timing

10. Exaggeration

This is the animation principle, introduced by the great animation masters Frank Thomas and Ollie Johnston. This principle defines the extreme expression of any action or expression. It is used basically for cartoon character.



Fig. 15: Exaggeration



11. Solid drawing

This is the animation principles which define the realistic drawing effect of any character or any object in our animation. This requires the knowledge of drawing a subject three dimensionally. With Solid drawing you will be able to draw a figure from any side, which will help in animating your drawing.



Fig. 16: Solid drawing

12. Appeal

This is the animation principles through which we can create the character according to their behavior or nature. It's basically characterizing any person in our animation to create it more real.



Fig.17: Appeal

Conclusion

So, an animation will not be completed without this principle as well as we always use it in our real life but we ignore it. In 2D and 3D animation the principles are same. Without these animation principles animation is incomplete. These principles make a character more attractive, flexible which drag more attention of audience.

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