Animated Models and it's Global Impact: A Dynamic Approach

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ABSTRACT

The present study examines the relationship of animated model and its impact in context of every area surrounding globally. The paper tries to understand how the animated models are much powerful than still models. The models are very useful in areas like education, training, research, simulation [Wade & Parent , 2000], modeling, Fashion Designing etc.

This paper is conceptual in nature and tries to initiate a more in-depth and detailed discussion on designing of still-to-animated models.

For the purpose of the study the author has itself created some useful animated simulation models and observe that these models has more impact on any person or student than still models.

KEYWORD

Virtual visual Art	Dynamic Physical Model
Animation	Design
Model	3D & 2D
Science	Object

Preface

Animation is a virtual visual art [8]; which display the innovation and creation of an artist. Mostly in all fields the 2D and 3D animation play their vital role in presentation of the related topics. In this scenario the animated model is necessary in some useful research area like medical science[5], space research science, air-craft designing[5], fashion designing, education, film and cartoon scripting, market research, physical modeling, chemical bonds designing etc. According to my research any one can easily understand the principal of working of any object display by animated models than still models. The still models don't show the behavior of the object of machine but it is easily observe by animation. Designing of 2D models is easier than 3D models but the 3D models are more realistic than 2D models.

- Limitations of Still models:

The still models are created in the file format like .gif, .jpeg, .bmp and .png etc. Whole concepts are displayed in one time. These models not suited for presenting the nature and behavior of anything. It can't show the step-by-step presentation of required items.

- **What is an Animation?**

It is a frame-by-frame presentation of the still images. It is both single layered or multilayered consisting motion and sound effects. If there are 15 frames moved in just 1 second then our eyes can't differentiate between still image and movie image.

- **Still models Vs Animated models:**

a) Still models:

In still models everything displayed at once. It can't show the steps of the model. Designing of that model is very simple and also cheapest in cost but the user can't understand the behavior of the model. He/She doesn't know from which corner the model start and how it shows their functions.

b) Animated models:

The animated models are useful in term that though it one can easily observe the step-by-step behaviour of any real world entity. The cost of animated models depends upon the complexity which it shows. Benefit is that no further training or documentation required with animated models because it is self explanatory in nature using the following concept:

"A picture can worth thousands of words."

- **Fields where Animation used:**

There are rich interest areas where we use the animated models. Here I focus some technical areas like:

Drafting and looking the samples in fashion designing,
Understanding the behavior and complexity of different levels in game simulation [8],
Developing the educational items for students and trainees,
Observing the behavior of a complex machine,
Construction of a dam, bridge or fly-over,
Nature and Architecture of pilot projects.
Simulation of Aviation, Real time systems etc.

- **Animations Types:**

Mostly there are two types of animated models as:

a) 2D Animation:

Only x and y axis is defined in 2D animations. Designers can't show the depth of the model because z axis is absent in this model. Drafting of 2D model is easy. It takes less cost and simply defines the nature and behavior of the objects.

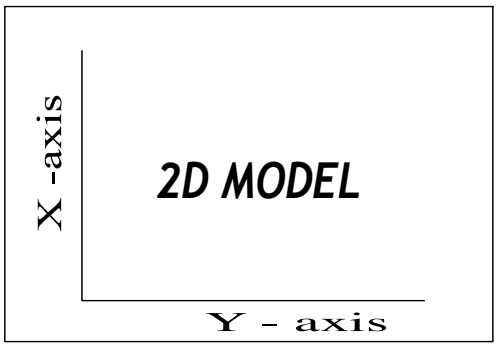


Figure – 1 2D Model Architecture

a) 3D Animation:

These models are more realistic than 2D models because the z axis is defined with other axis to show the depth or height in the model. 3D models are closer with user thus they fell much comfort with these models than 2D models [6].

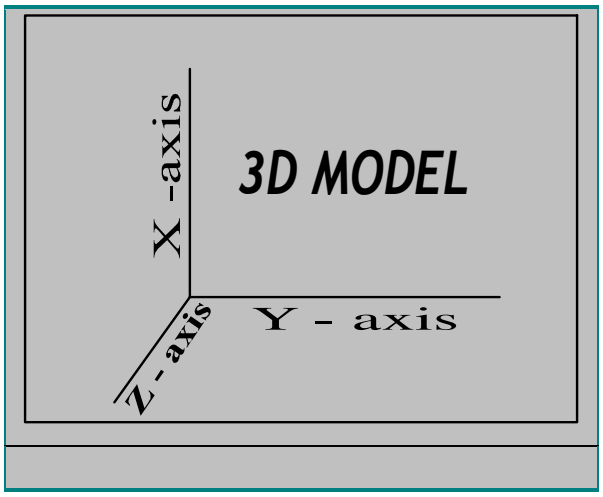
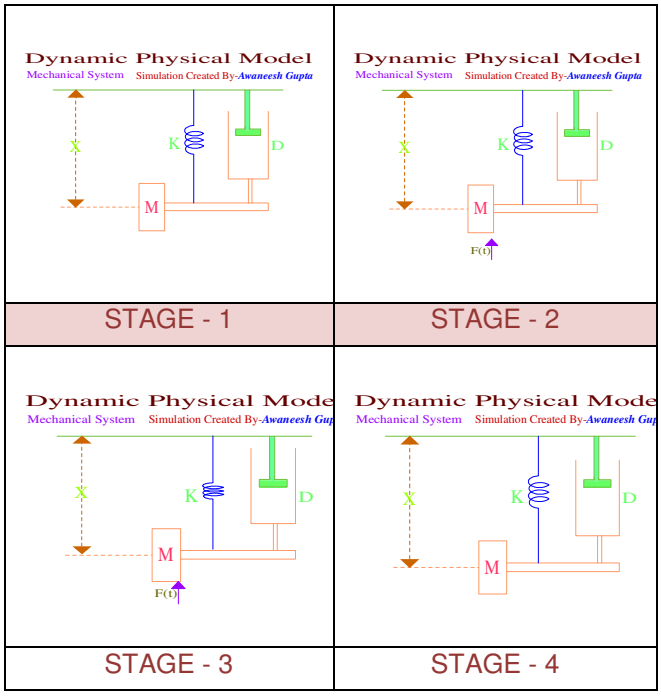


Figure – 2 3D Model Architecture

- **Scope and importance of 2D Animation:**

Models easily created by animators. After rendering it is available for subject. Simply shows the behaviour of any machine or objects in less effort and time.



Figur – 3 Stages shows the animation of Dynamic Physical Model.

The above model represent the suspension of an automobile wheel when the automobile body is assumed to be immobile in a vertical direction[9]. It can be shown that the motion of the system is described by the following differential equation:

$$Mx + Dx + Kx = KF(t)$$

If we design a luxury car then if the value of torque is less then 1 (value < 1), then we make smooth drive. The all 4 stages shows the behaviour of Dynamic Physical Model of designing of a luxury car.

- Scope and importance of 3D Animation:

Create real effects in human mind. The person [4] feels that the model is live [1]. Ex-Dinosaur presents in most popular film Jurassic park [7].

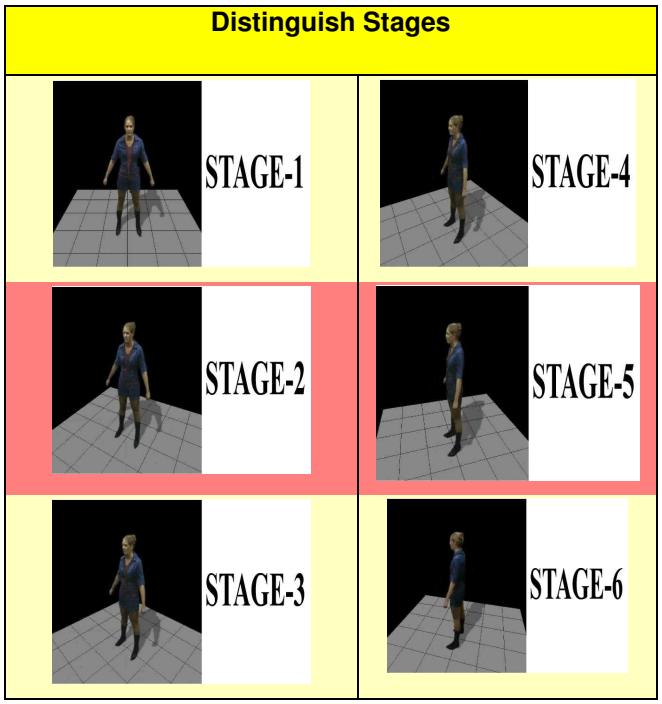


Figure – 4 Real Time Display of the movement of a person.

- Difference between 2D models and 3D models:

Z axis not defined in 2D model but these models are easily created and used anywhere in less effort. It support by all motherboard and not required to install separate graphics card.

3D model shows look and feel concept [6]. It is more realistic than 2D models but tedious in term of designing and modeling. It requires enhanced graphics facility therefore the graphics card pre-installed in machine where the model design or simulate [3].

- **Research Analysis:**

According to research I observe that if both the still and animated model available; than the peoples prefer animation. The reason of their choice is:

- Feel original,
- Easily understandable,
- Represent step-by-step behaviour,
- Self explanatory in nature,
- No documentation needed,
- Start-to-end activity display by model,
- Use multiple time,
- Consistent,
- Unambiguous,
- Easily traceable,
- User interface is simple.

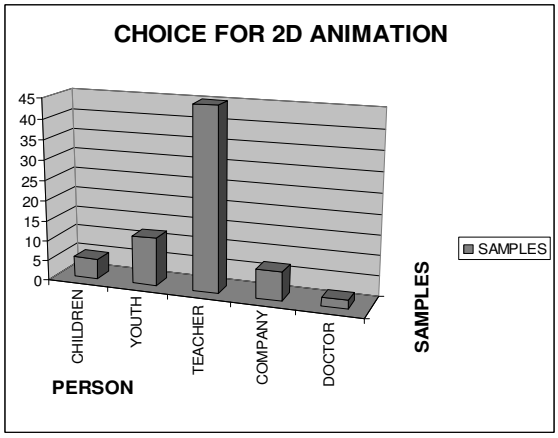


Figure – 5 Samples of Person using 2D Animation.

Mostly teachers and student use 2d animated models. Doctors and children prefer 3D models [3, 6].

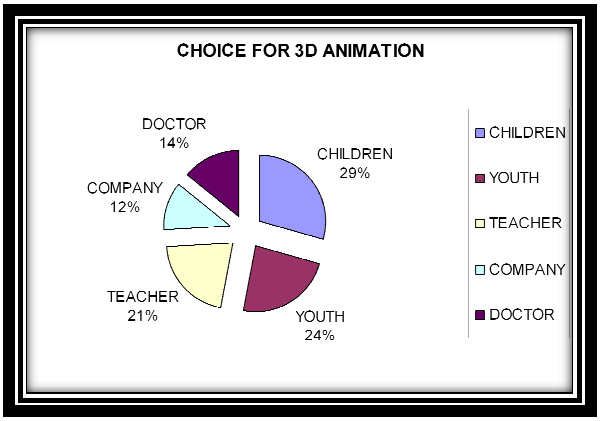


Figure – 6 Percentage of Person using 3D Animation.

- **Impact of Animated Models:**

- Increased learning capability.
- New innovations & ideas.
- Represent rear species and things in low cost.
- Media related animations.
- Advertisement Films
- Animation Films.
- Research Laboratories to represent chemical bonds and reactions.
- Biotechnology etc.

- **Process of Animation:**

System Analysis → System Designing → System Postulation

Figure – 7

DISCUSSION:

Think about the system	Create a Model	Observe the Behaviour of the Model

Tools to be used in Creating Animations:

A number of tools present for creating animations. Some of them are for creating 2D animation and others are for 3D animations. The names of popular tools are hereunder:

- **Macromedia Flash Mx: - Creating 2D models.**
- Win Morph: - Creating Morphing and Wrapping effects.
- Animation Pro. : - Creating 2D models.
- 3D Studio Mx: - Creating 3D models.
- Abrosoft Penta Morph:- - Creating Morphing and Wrapping effects.

The field of animation required high end graphics designing, sound editing, and innovative capabilities. The animator observer the things, their functions and create scripts. According script he/she make the objects and related functions. All objects fit at their proper timelines and when the whole work combined and render then an animation will be created.

The animation is both 2D and 3D. Among of all the 3D models are most popular because these are looks real [6]. Companies, Doctors, Research Scholars, Children prefer 3D-Modeling while Institutes, Teachers, Students prefer 2D-models.

The field of animation is not undemanding. It is a very tedious and time consuming process, required high end imaginations, knowledge and editing capabilities. The animators keeping the idea in their mind that:

• **Who use the animation?**
• What are their age groups?
• What is the basic knowledge required?
• What are the benefits of watching animations?
• How the animation beneficial for the society?

The above questions solved by animators by their creations. Animations are pure virtual but their

impact is no doubt tremendous. A recent study on the animation industry by NASSCOM [10] shows that the global animation production market is set for major growth. India is gradually positioning itself as a significant provider of animation production services mostly the low cost animation services. By all account, the animation production industry in India has the potential to grow into a major export engine for the country.

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