

# A STUDY ON COMPUTER GRAPHICS & ANIMATION IN FILM MEDIA

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**Abstract** – The main aim of this research article is to study the impact of computer graphics and animation in film media. In this fast developing information society computer graphics and animation has become the most important communication tool. The development of the film media and the progress of computer graphics and animation are intimately related to each other in many ways. The film media not only provide information and entertainment, but they also provide directly and indirectly many opportunities to the unemployed people in India. Every year, thousands of films are released with computer graphics and animation. Multibillion film projects are now very common in India. Computer graphics and visual effects are now becoming the part of all cinema projects. Even though 3D animated film and ordinary commercial film has differed, the visual effects are common. Many famous Indian film directors have used visual effects to communicate their dream effectively. Computer graphics have impact on the target audience, fuel to our knowledge, attitudes, and behaviors. 3D, Animations, graphics are inevitable resources in the creative industries. Advertising on Television, Dailies, and other electronic media at present fully depended upon the computerized format. The main aim of this research paper is to study and analyze the impact of computer graphics and animation in the main stream cinema. This paper also analyses the communicative aspects of computer graphics in the film media.

**Key Words:** computer graphics and animation, film media, 3D animated film, creative industries, Visual effects, cinema, communication

## 1. INTRODUCTION

India is the largest film production country in the world. Particularly Tamil Cinema, topper in the list of Indian Cinema, produces hundreds of films per year. It has been developed in technology wise also and so that it immediately catches up the new technology. The latest technology like 3 D Animation and Graphics heavily incorporated in the recent films raw huge audience invariably from children to senior citizens.

A film is a work that can be projected photographically in a theater. Film is made up of a series of still photographic images when projected in succession these images provide the illusion of movement [1]. Each individual photographic image is called Frame. Designer W.A. Dwiggins first used the term Graphic Design in 1922. Graphic Design is one of the initial stages of Film production. Film Production is classified into three stages (i) Pre-production (ii) Production (iii) Post Production. From the initial stage to final post production Animation and Graphics are serving as an effective communication tool. A story board, complete titling and special visual effects are some examples of Animation and Graphic application in movie Industry. Graphical effects are also used in editing stage. The transition between two shots is developed from Graphics.

## 2. 3D ANIMATION AND GRAPHICS

A Graphic Designer must balance three conflicting approaches. Utilitarianism stresses “the greatest good for the greatest number [2]”. In the context of graphic design, it means that a design should be readable, legible and useful. The need for it to be noticed the idea that it should be pleasing to look at the need to create unique style. Because innovation seldom comes from designers who follow the ‘middle way’ being sensitive to conflicting ethical philosophies is one of the reasons that the field of Graphic Design is challenging and rewarding. Sometimes we design for our peers and not to solve communication problems. Communicating visual images are not winning awards. It should always be the graphic designer’s ultimate goal. The persuasion of negative stereotypic productions are the promotion of products that are harmful to people and the appreciation of previously presented graphic designs. Because of the combination of text, graphic elements and images form a powerful communication link, a print or screen media message can easily persuade a viewer by its content. Many computer graphics experts predict that dangerous stunts and even humanlike characters speaking dialogue soon will be completely fabricated through graphic designs [3]. Moreover the technology succeeds in marketing also. According to Glaser (Graphic designer) “Our whole view of culture is linked to money and success” and it is recognized that Graphics is a potent instrument of marketing. So it is necessary to conduct research on the topic Animation and Graphics for effective Communication is a need of the hour.

### 3. ORIGIN OF CAMARA BY LUMIERE BROTHERS

The Lumiere brothers were the inventors of the 'Cinematograph' a compact portable machine which with a few adjustments could be used as a camera or projector or printing machine. As a photographer themselves, cinema for them was no more than an extension of photography [4].. Lumiere brothers narrated no story but reproduced a place, time and atmosphere. These brief moving reproductions were therefore termed 'actualities'.

So while the Lumiere brothers laid the foundation of realism in cinema, me lies pointed the way to 'expressionism' and to the magic of cinema [5]. Lumiere's realism introduced cinema to the 'mise - en scene' while me lies pioneered the technique of 'stop motions photography' to create magical special effects in his many 'trick films'. Elaborate stage sets and special effects were the hall marks of his films.

#### 3.1 FILM LANGUAGE

Before expressionism was familiar cinema was used as a simple mechanical recording, preserving, and reproducing moving visual spectacles - whether of life of the theatre or a small miser - en scene. Miser - en scene is nothing but recording an actual happening without an inter cut of cinematography filming [6]. In between 1910 and 1915 Birth of a Nation, battleships Potemkin (Russian) were developed. These films were made with various editing techniques like Rhythmic inter cuts, advanced sound effects.

The pioneers of film language were D.W. Griffith, Porter, Melies. Invented the double exposure and multiple exposure techniques and masking backdrop. He also invented dissolve, fade in, fade out, and pan shots [7]. Melies master pieces were Cinderella, A Trip to the Moon (First studio and setting combination filming). Most of his works were destroyed in World War II. Porter made the first story telling film named 'The Great Train Robbery', etc.

#### 3.2 SERGEI EISENSETEIN

He invented close up shots, pan shots, tracking shots, parallel montage, alternate montage and inter cut. Of these the most significant and the most revolutionary was montage, derived from the masterpiece of Griffith [8].. Montage gave birth film as an Art. It gave importance from mere animated photography to artistic medium.

#### 3.3 ALFRED HITCHCOCK

He developed film language by introducing long mise - en scene thrilling effects, top angle, camera moving, etc. His Masterpiece works are 'The Psycho' (First use of Top Angle to hide message), only seven shot film 'The Rope', The Bird, etc., (Best example for sound effects and settings).

#### 3.4 INDIAN FILM LEGEND SATYAJIT RAY

Ray's work traces the essentials outline of the middle class in modern India. He started his career as an advertising professional And then came to film making as a director. He made films with Bengal Government's film division funds. His films Apu trilogy, Pather panchali, Aparajito, Apur Sanchar got International Awards and still running anywhere in the world. He got the lifetime achievement Oscar Award for his contribution to film industry. He also made documentary films like Tagore, Sikkim etc.

Film Finance Corporation raised the expectations in 1906's for serious film makers. It provides loans etc. The FFC began in a business-like manner giving loans only to established film makers. But in 196 low budget film makers also got finance from film making [9].

### 4. ANIMATION AND GRAPHICS

First two dimensional animation films were developed by Walt Disney in 1928. The two world famous characters of Mickey and Mouse were developed in that time. In that time matt painting was the best replacement for setting. Matt painting is nothing but painting on the glass by visual artists and films with ordinary backdrops. It is similar to masking particular area. Alfred Hitchcock used this method of matt painting in his film like Psycho (Extraordinary ghost bungalow). Soft wares like Flash Mix professional Toon boom gives reality in tow dimensional short films [10].

Before this invention of computer graphics soft wares fine art graduates and artists draw each and every frame by frames in white backdrops. Every Characters postures and movements and gestures smiling, angry expressions were drawn in art

papers [11]. It needs only creativity but also hard work. For a 1 hour animation film studios spend one full year for making into moving.

#### 4.1 THREE DIMENSIONAL CHARACTERS

Now a days three dimensional characters are developed by software's like 3DstudioMax, Maya Softimage, etc. Films like Jurassic park (Dinosaurs, Forest Set up) Titanic Star wars, The Independence Day, The Armageddon, The Terminator, have plenty of special graphics effects and 3D Animation [12]. Now full length animation films like the Ice age,' The Narnia', are running successfully. Now animation and graphics industry is developing a lot.

#### 4.2 NASSCOM SURVEY

According to 'Nasscom survey' in 2007 the requirement of animation and graphic effect technician will grow up. The Software's are used not only graphics but also titling, editing, Virtual sets [13].

### 5. TAMIL FILM INDUSTRIES

Tamil film industry it has its own growth and developments. There is no clear-cut period about its origin. Because at the time Telugu film industry also combined with the Tamil industry. Around 1919 the first Tamil movie film was taken by Nataraja mudalier. There was no speech in that movie. After some time the movie kali dos was taken it have had speech with that. So this movie was considered as the first movie with speech.

After that the industry has a very fastest growth. All the techniques behind the screen and in front of the screen were grown its way. The cinema was considered as the part of the people's life. Because that time there were, no more entertainment in our country. Cinema reflects the real life of the people. Especially the movies with started the first letter 'Pa' has got a great impact in people's life. It was closely related in the people's life. Also the films Directors like Balachander, Bharathi Raja, Bakiya Raj have done marvelous contributions to the Tamil cinema field. Everyone has their own individual quality. Due to the time factor gets the field gets its own changes. Trends are changed. The film industry slightly changed it's in its total style. New faces were entered with latest and innovative ideas like Shanger, Kadir, Lingusami. These are some important directors always think and introduced some latest ideas in all levels.

Here the researcher gives more emphasis for Cinema industries and how these above said concepts used in those industries. Instead of building very huge sets like bungalow, studio setups, back drops virtual sets are used in film making. In Tamil film industry the films like 'Jeans' two identical character of Prasanth and virtual 3 dimensional set of Nokia song in 'Anniyan' as well as in 'Alavandhan' the mightiest of the character is revealed through special graphical effects. Films like 'Indian' (Netaji Subash Chandra Bose award giving shot) and the film 'looty' has plenty of works related with software's.

#### 5.1 VIRTUAL SETS

Virtual sets are nothing but sets created by sing soft wares in system. After the film is cinematographed with blue backdrops the background is removed by using soft wares Like Combustion. Two different camera angles (the system camera angle and cinematography camera angle) is matched through match movie technique.

### 6. CONCLUSION

The research tends to conclude that the film industry is not only mobilizing huge amount of money, but also it contributes a lot to the society and it provides entertainment, awareness in the means of political, economical, cultural, social, etc. Science and technological advancement must be adopted in cinema for its effective communication and entertainment. When more creative applications of computer graphics and animations incorporated in film media the impact is huge. Today's films' success mostly depends upon youth, and children who belong the age between the ages eleven to eighteen. Generally more youngsters are attracted towards visual effects and animation in films. So visual effects and computer graphics and animation works in cinema definitely changes the mindset of the younger generations towards scientific advancements. This study suggests computer graphics and animations work in film media, which will strengthen the film in communication and entertainment aspects.

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