# Digital Visual Effects (DVFx): Comparative Iconography Analysis in Malaysian, Indian and Australian Award-Winning Movies

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## ABSTRACT

This aim of this article is to investigate the usage trends of DVFx technology in Malaysia, India and Australia's film industries. DVFx is also called creative support tools or CST. The variety of CST forms used in the production of most films has changed the landscape of production and post-production in Malaysia, India and Australia. Eleven films from those countries that have been awarded the best visual effects in local film festivals were selected as a sample to compare the trends in DVFx usage in those countries. Images and digitally generated scenes were analysed and have revealed a new level of digital creativity in the film industry. The iconographic analysis is divided into three categories based on the function of DVFx usage. These functions comprise the construction of 'fantasy', creative simulation and storytelling support, and visual enhancement and corrections. This study also found that the design structure is the most crucial element in a film. DVFx is used in the creation of fantasy elements through the creation of characters, settings and props. DVFx has also been used to reinforce the storyline by stimulating creativity through the creation of spectacular action scenes. DVFx have also acted as a visual enhancement tool through the animated design of the opening titles and transition scenes.

**Keywords:** *Digital visual effects, filmmakers, film technology, creativity, production*.

## INTRODUCTION

Digital effects involve all the techniques generated by computer technology and software. Computer-generated imagery or CGI is an example of digital effects used in the film industry. Generally, digital visual effects (DVFx) are a result of technological advancements and digitalization at the end of the 20th century that have had an impact on the concept of 'special effects' and 'visual effects' modifications. According to Scott (2005), drastic changes can be seen in the film industry in the 1980s and 1990s when the industry underwent a transition between the old style of special effects to digital visual effects. The digitalization process has also given filmmakers the ability to use special effects techniques in the visual manipulation process. As such, the emergence of CGI techniques or computer-generated imagery has opened a new chapter in the technical and creative aspects of film production. According to Hasrul (2019), the use of DVFx in film production has improved the narrative presentation but the most important thing to be aware of is the storyline aspect and the power of the story brought about. Thus, based on this impact, digital visual effects are best known as a digital tool to provide a special effect in the visuals produced primarily in Hollywood. DVFx enables production crews, directors and experts to use their imagination, technical knowledge and creativity to produce stunning and spectacular work.

The revolution of technology also transformed the audience taste especially the new generation and leads to a tendency to be interested in specific genres such as action and sci-fi (Hasrul, 2019).

The digitalization of special effects has brought a drastic change to the digital landscape of the film industry. DVFx has opened the creation and production space to digital as well as conventional techniques. These creations include computer-generated landscapes, objects, characters or creatures, and narrative aesthetic manipulation. These involve a lot of visual and spectacular illusions created using digital computer technology such as motion capture, 3D animation simulation programs, and modern techniques such as digital split-screen, crowd simulation engines and more. Venkatasawmy (2012) has detailed that the use of DVFx to achieve visual manipulation, trickery and illusion has three main functions. The three functions are the construction of 'fantasy', creative simulation and storytelling support, as well as visual enhancement and corrections.

### a. The Construction of 'Fantasy'

This first function was widely applied at the beginning of the use of DVFx. The construction of fantasy in the cinema requires creative imagination. This work includes the creation of landscapes, foregrounds and backgrounds, futuristic worlds, and objects or characters that do not exist in the real world. Most films that use this fantasy element involve sci-fi, horror or historical genres, as such genres of film require imagination and fantasy to create a tricky situation and reincarnate it into reality. Other examples of the DVFx creation of fantasy worlds are aliens, monsters, dinosaurs, doomsday stories, mythical tales, futuristic-intensive worlds and space exploration.

### b. Creative Simulation and Storytelling Support

This second function concerns the use of DVFx in imitative reproduction and creative simulation involving scenes or casting needs that are very complicated, very dangerous or involve high-cost factors if generated conventionally or in the real world. Most movies with the theme of world destruction or warfare will use DVFx technology in the creation of such 'destruction' scenes. Besides, digital simulations such as fire and flame, explosions, and wreckage also use DVFx to help the audience with the journey of the story narrative. Other examples that fall into this category are the creation of a scene in space or a thrilling scene such as an actor crossing between two tall buildings on a rope. All these scenes are required in the story and need to be done using DVFx to support the storytelling.

### c. Visual Enhancement and Correction

This third function has become the norm of DVFx use in the film industry. It is widely used during editing or post-production processes to ensure that technical elements used during filming processes such as the use of wires are edited and removed to ensure the visuals are truly 'clean' and 'flawless'. Hence DVFx is used to correct, add, remove or alter any visual distraction in a movie during the post-production process and also as an alternative to re-shooting scenes. Also, the skills and creativity of an editor play an extensive role in enhancing the visuals with techniques such as colour corrections and animated transitions.

## METHODOLOGY

According to Hansen and Machin (2013), textual analysis is used to evaluate media content and does not lead to an assessment of theory. Therefore, this method gives freedom to a researcher to determine the aspects and point of view when studying transnational media content. Thus, according to Brylla (2018), to study the film as a text, the sampling of films

should have three main features, namely manageability, relevance and representativeness. Manageability means the suitability of the method to facilitate the data collection process. In this case, the use of qualitative methods for film analysis is easier to manage than quantitative methods that require coding techniques and only focus on small-sized samples. Relevance refers to what bases should be selected in the movie text when starting a research and analysis process. The researcher needs to understand and know the concepts to be investigated, which should depend on the objective of the study, and also select the movie texts appropriately.

In this study, the selection of the sample was based on films that have DVFx elements in any scenes and showed excellent achievements in local film festivals. Comparison of these visual aspects will only evaluate the use of DVFx, special effects which are digitally generated by the software and will not evaluate other effects such as practical and mechanical effects. Therefore, this visual analysis will also use the units of analysis proposed by Venkatasawmy (2012) regarding the three main uses of DVFx which are the construction of fantasy, creative simulation, and visual enhancement elements. eleven films were selected for comparative analysis in this study.

Of these, two films each from Malaysia, India and Australia were selected as data. The selected films have won awards in the best visual effect's category in several local film festivals from 2011 to 2015. Table 1 shows the list of movies and the awards they received. Based on the table, however, the category of best visual effects was not contested in Malaysia and India in 2012 for some reason, while only three films were analysed from Australia as in 2011 and 2014 the films that won this category were animated films. Animated films were excluded from the sample of this study because they are entirely produced by computer and do not involve the integration of actual actors at the shooting locations. Then the second dimension of this comparison will look at the iconographic or visual aspects that use DVFx. Through this comparison, the analysis will evaluate the use of DVFx in selected films based on the units of analysis. The units of analysis contained in fantasy are landscape, background, foreground, character and objects, while the units in the creative simulation are the creation of fire, explosions, wreckage, destruction and any kind of disaster. The unit of analysis in visual enhancement includes the use of creative transitions and graphics animations.

Table 1: List of Selected Movies from 2011 to 2015

| Year | Movie Title | Achievements |
|------|-------------|--------------|
| **MALAYSIA** | | |
| 2014 | *Seventh* | • Best Visual Effects Award, Malaysian Film Festival 2015 |
| 2015 | *Cicakman 3* | • Best Visual Effects Award, Malaysian Film Festival 2016 |
| | | |
| **INDIA** | | |
| 2014 | *Dhoom 3* | • Filmfare Award for Best Special Effects 2014 |
| | | • Guild Award for Best Special Effects 2014 |
| 2015 | *Baahubali: The Beginning* | • 63rd National Film Award for Best Film 2016 |
| | | • 63rd National Film Award for Best Special Effects 2016 |
| | | • Filmfare Award for Best Film (Telegu) 2016 |

| AUSTRALIA | | |
|---|---|---|
| 2013 | *The Great Gatsby* | • AACTA Award for Best Film (2014) |
| | | • AACTA Award for Best Editing (2014) |
| | | • AACTA Award for Outstanding Achievement in Visual Effects (2014) |
| | | • AEAF Award for Visual Effects (2013) |
| 2015 | *Mad Max: Fury Road* | • AACTA Award for Best Visual Effects or Animation 2016 |
| | | • BFCA Critics' Choice Award for Visual Effects 2016 |
| | | • AACTA Award for Best Film 2016 |

The time frame for this study, namely the selection of films from 2014 to 2015, was chosen because it began ten years the beginning of the 21st century. There has been a dramatic change in the use of DVFx in the film industry both in quantity and quality starting in the 2010s. This period also saw the beginning of the 'movie event' and 'blockbuster syndrome' in most Hollywood films (Venkatasawmy, 2012).

FINDINGS

According to Murphet (2005), to verify the narrative analysis of a film, the main thing to do is to begin analysing the raw narrative unit of the medium such as shots or visuals. Traditionally, montage and '*mise-en-scene*' are two distinct film aesthetics. According to Barsam and Monahan (2013), *mise-en-scene* refers to 'staging'. Staging refers to the overall appearance of a film rated on the two main components of design and composition. The design includes elements such as character, setting, props and lighting, while composition refers to the balance between the actor and the object in a frame. Ideally, the movie design should accompany a story narrative. Hence, generally, the analysis in this section will look at the visual analysis and *mise-en-scene*, which are the essential elements of the visual composition. As stated, the analysis in this section is divided into three main categories, focusing on the function and purpose of using DVFx in a film as suggested by Venkatasawmy (2012). The visual analysis of *mise-en-scene* and DVFx usage is integrated into the discussions of the construction of fantasy, creative simulation and visual enhancement, and each category also has more specific units of analysis.

*The Construction of Fantasy*
In this section, the aspects of digital visual effects to be analysed include the creation of elements such as characters or creatures, settings (which includes the landscape or background), objects, and spectacular composition.

*a.     Characters and Creatures*
One of the ways to create a dramatic impact within a movie is through the creation of characters or creatures entirely created and integrated through DVFx. According to Whissel (2014), the process of digitalizing characters begins with life material as maquettes that will be scanned into the computer to simplify the process of digitalization such as 3D modelling or keyframe animation. There is also technology that combines human and digital animation through motion-performance and facial material techniques. Consequently, based on the findings of the study, several of the films demonstrate impressive use of DVFx in producing digital characters and also integrating humans and DVFx to create unique characters to

enhance the narrative and spectacle. Most of the characters created also have a link with the genre and narrative of the film.

The use of DVFx to create characters for films in Malaysia is particularly suitable for *Seventh* and *Cicakman 3*. In *Seventh* (2014), CGI is used to transform the characters of the old folks' house ghost spirits in most scenes using DVFx. Based on an analysis of 36 scenes using DVFx, 24 scenes feature the appearance of a digital ghost spirit character or creatures with a variety of looks. As *Seventh* is a horror and comedy genre movie, there are several instances of emerging spirits inserted with comedy elements such as an old man's spirit looking for his fallen eyebrows after a loud sneeze and a scene where Mimi brushes the hair of an old lady's spirit until that woman no longer has a scalp. There is also a scene where a character's hand is extended, and most of the resulting souls have no eyes. The main character, Ying, was also featured in a wholly digitalized ghost look in the scene where Yee manages to unravel the true tale of Ying.



Figure 1: Ghost Character Ying in Seventh (2014), Entirely Produced Using CGI Technology



Figure 2: Super Bro Point of View Using a Futuristic Technology Interface in Cicakman 3 (2015)

*Cicakman* (2015) features two CGI characters using DVFx in some of the scenes in the film. The characters of Cicakman and Super Bro appear in both digital and practical effects through the use of costumes. DVFx are used as a tool to strengthen the characters of both Cicakman and Super Bro. For example, in the beginning, Man did not realize he was the next Cicakman in Metrofulus City. One day when Man was working cleaning windows, he fell, and suddenly his tongue became long like a lizard's (lizard is cicak in Malay language) and Man used his tongue to cling until he could be rescued. The scenes were created using DVFx. Super

Bro's characteristics are also enhanced in digital form using DVFx primarily involving Super Bro's points of view. The futuristic interface technology element is used to show the sophistication of Super Bro as a high-tech robot in contrast to Cicakman. Additionally, DVFx is used for both of these characters during the action scenes. These action scenes will be discussed further in the next section.



Figure 3: Sahir's and Samar's Characters in the Same Frame in Dhoom 3 (2014)

*Dhoom 3* (2014) features unique character development through the use of the digital split-screen technique to support the main characters of the movie, who are twins. DVFx is used in the scene that shows Sahir has a twin named Samar. The same actor, Ameer Khan, performs both characters. The audience does not know that the two characters look like Samar until the final scene before the film's intermission. In that scene, Sahir runs from the stage after the end of the show. He moves through a corridor that has reflective tubes and heads to his room. When he reaches his room, Sahir sits in front of the mirror and Samar appears in front of the mirror (refer to Figure 3). The next scene shows Sahir and Samar in the same frame performing a great action scene. Based on the findings, five scenes show Sahir and Samar in the same frame. The action scenes will be described further in the creative simulation section.

The epic movie *Baahubali: The Beginning* (2015) uses DVFx for the creation of creatures such as animals in the film. Digital animals such as snakes, cows, elephants, eagles and horses are digitally generated using DVFx as most of the action involving animals is not appropriate for real animals. A snake is the first animal to appear in the scene where Avanthika is in the forest and wants to shoot Shiva using an arrow. The green snake prevents Avanthika's attempt to shoot Shiva who is heading to Mahishmati. Elephants are widely used in this film as elephants are a unique animal in Indian cultures and beliefs. Elephants and horses are used as working animals in war and elephants are also used to help Mahishmati's military forces resist the enemy's attacks and assist in the construction of the Bhalla gold statue.

Images of these animals are generated using DVFx as there are scenes of the animals being killed and injured in battle. Animals like bulls were entirely produced using DVFx in the Bhalla scene, which shows the heir of the Mahishmati Kingdom trying to fight a bull then being saved by Kattappa. The eagle is invented in the film as an animal who sent assistance from Saketa (Chief of the Mahishmati Kingdom army) to help Baahubali defeat Balla. As a whole, all the animals used in the film are produced using computer-generated images or DVFx as the film uses many animals in the storyline as narrative elements and it is difficult to control real animals during live filming.

Figure 4: Animal Creatures in Baahubali: The Beginning (2015)

In the Australian film productions, the use of DVFx for character creation is a feature of *Mad Max: Fury Road* (2015). In this movie, the commander Imperator Furiosa, played by Charlize Theron, has no left hand and uses a mechanical robotic hand. There is a scene showing War Boys attacking Furiosa when she is stranded in the desert after taking an oil tanker to Gas Town on the orders of Immortan Joe. In the scene, Furiosa is standing in the desert clearly showing her hands and the scenes were produced using DVFx. There was also a scene showing Furiosa having a metal prosthesis in place of her left hand. DVFx is also used to create a creature. In the opening act of the film, a man appears on a hill and is watching something. A lizard (computer-generated image) appears behind the man and he eats the lizard ravenously. *The Great Gatsby* (2013) have no assisted or DVFx characters and DVFx are primarily used in other visual creations such as backgrounds and settings.



Figure 5: Furiosa in Mad Max: Fury Road (2015)

Hence, overall, the production of characters and creatures using DVFx in the films demonstrates the level of creativity and magnificent imagination among the creative team members. All the characters and creatures created using DVFx are in line with the genre and narrative style of the films. The films from Malaysia and India have more fully used the advantages and techniques in the creation of characters and creatures than the films from Australia. However, from the aspect of creativity and innovation, Furiosa's character in *Mad Max: Fury Road* is more prominent than other characters in the studied films. The following analysis will explore the use of DVFx in the creation of the settings of the films.

*b.    Background Settings*
Settings showing place and time are one of the most critical elements in the *mise-en-scene* that help to drive the journey of a story. Through proper use of settings such as background, settings will help the audience understand the story better. In this analysis, most movies use

DVFx technology to create a place and time setting that fits the storyline. Several films use creative imagination to produce settings such as in historical films as well as sci-fi and drama films. From the analysis, the time and place setting in these films can be divided into two groups. The first uses historical periods such as empires of ancient times and the secondly is contemporary, modern and futuristic eras.



Figure 6: Setting for Baahubali: The Beginning (2015)

In the first group, the historical backgrounds can be divided into those before 1900 and after 1900. Films with a background before 1900 is *Baahubali: The Beginning* (2015), while the background is after 1900 in *The Great Gatsby* (2013). The dramatic and gorgeously background setting also created in the *Baahubali: The Beginning* (2015). Most background scenes that use DVFx are inspired by nature to suit the background of this movie that relies on the past. The imaginary background settings in the film include waterfalls and the fantasy stunning park before the Kingdom of Mahishmati. The imagination of the DVFx artist in the movie is extremely impressive with the creation of a lakeside mountain setting, as well as a splendid and spectacular setting. The creativity and knowledge of the DVFx crew on old palace architecture are also seen through the creation of a magnificent Royal Mahishmati palace. The greatness of the architecture of the castle not only involves the external aspect, as the interior architecture is also created using DVFx.

The background settings for films set after 1900 also show the excellent quality of DVFx usage. The impressive quality is demonstrated by the production of *The Great Gatsby* (2013) from Australia, which created a background of suburban New York in 1929. DVFx is used to create architectural buildings and the city's atmosphere at night requiring light colour balance to revive realism elements in this movie. Also, there is a scene showing an industrial area which is idle and filled with industrial residues as another necessary background in the film. The film also uses a background of a luxury bungalow on the seafront owned by Gatsby and Tom. Their luxury homes are also produced using DVFx involving exterior and interior design settings. DVFx is also used in the Gatsby flashback scene when a small star starts at night in a village that shows the beauty of the stars in the sky. The flashback scenes showing Gatsby in the middle of the night were also digitally produced using DVFx.

Figure 7: Setting for the Film The Great Gatsby (201*3)*

Films using modern and futuristic background settings are *Seventh* (2114), *Mad Max: Fury Road* (2015), *Cicakman 3* (2015) and *Dhoom 3* (2014). *Cicakman 3* from Malaysia also uses DVFx to create the background setting of a fantasy country called Metrofulus. As seen in Figure 8, the production team uses DVFx technology to transform Putrajaya, the modern and advanced Malaysian administrative centre to Metrofulus City, a modern-day fantasy city whose architecture is influenced by European civilization. Examples of Metrofulus City settings in this movie include the court, police station, city centre, a theme park and a nightclub. In addition to using buildings in Putrajaya recreated with DVFx, the background of the movie also uses a circus fun park. The background location *'Taman Riang Metrofulus'* (Metrofulus Fun Park) can be seen in the scene where Cicakman tries to save his wife and son who are Super Bro's hostages. The use of DVFx in this movie to create the background settings are notable as most of the locations in this movie do not exist in the real world and needed great imagination and creativity from the creative team members.



Figure 8: Background Setting of Metrofulus in Cicakman 3 (2015)

The Indian film, *Dhoom 3* (2014) use transnational location settings in Chicago, United States, and London, England as well as India. *Dhoom 3* uses a location in Chicago as the movie's main setting. Chicago's background is widely used during action scenes and stunts, while DVFx is used during the scene in a classical English theatre where Sahir performs an acrobatic stage show in act one and two of the narratives. In the scene, the backdrop of the theatre was produced using DVFx including the interior decoration of the hall, seen as Sahir hangs across the audience in the hall. The setting of the theatre can also be seen during the flashback when Sahir's father is building the Great Indian Circus. DVFx was used to create the hall's background and performances in two different timelines when Sahir was a kid with his father and when Sahir grew up and performed in a prestigious hall. Next, *Mad Max: Fury Road* (2015) from Australia use the same background setting of wilderness and deserts. In both of

these films, DVFx is widely used for creative simulation purposes such as a sandstorm. This creative simulation will be discussed further in the second section of the analysis.

As a whole, this section has analysed the use of DVFx for background settings that suit the time of the movies. DVFx such as the use of 2D and 3D animation, green screen, split-screen and CGI is used to create background settings that indirectly support the genre and film narrative. The use of DVFx for most of the films is very high quality, primarily the fantasy construction and audience imagination as seen in *Baahubali: The Beginning* (India), and *Cicakman 3* (Malaysia). The next section will focus on DVFx usage to create props and objects in the films.

### c.      *Props and Objects*

Props and objects are elements of *mise-en-scene* that reinforce the time and place settings and character presentation. According to Barsam and Monahan (2013), props in artistic films involve elements such as furniture, interior decoration, fashion, technology and objects that help audiences understand the characters, background, and the place. For example, a film set in the 1960s should use vehicles or fashions from that decade to ensure a balance of realism elements and viewer logic. The analysis in this section focuses on the creation of objects using DVFx which also helps in narrative performances and creative visual presentation.

The most apparent object created using DVFx in most movies is a sculpture. Sculptures can be seen clearly as props and narratives enhancement in *Cicakman 3* (2015) from Malaysia and also *Baahubali: The Beginning* (2015) from India. In *Cicakman 3*, a sculpture appears in a Metrofulus area as a memorial to the superhero's sacrifice to overcome crime in Metrofulus. The scenes with the Cicakman sculpture are produced using DVFx technology and can be seen at the beginning of act one when the sculpture is obscured, dirty and ignored because Cicakman has disappeared. Man finds a mysterious box on the sculpture as a sign he is the next Cicakman.

There is also a scene showing the destroyed Cicakman sculpture because residents of Metrofulus feel that Cicakman is dead and the new superhero Super Bro has replaced Cicakman. However, in the last scene of act three, the Metrofulus City Council has rebuilt the new Cicakman sculpture as Cicakman managed to beat Super Bro and to save Metrofulus. Thus, the sculpture of Cicakman produced using DVFx is a computer-generated object that gives meaning to the storyline of *Cicakman 3*. The poor and dirty sculpture at the beginning of the movie shows the previous Cicakman, while the scene when the sculpture is destroyed is a representation of the new spirit of Cicakman who will beat Super Bro. The sculpture is also a symbol of society's recognition of the strength and courage of a superhero.

Furthermore, objects such as sculptures are also widely produced digitally in *Baahubali: The Beginning* (2015) from India. In this film, a giant golden statue can be seen as a symbol of the power of King Balla who seeks to seize the Kingdom of Mahashmati from Baahubali. The gold statue, named Bhalla Deva, is digitally generated and is a 100-foot tall construction in front of the palace of Mahashmati, which symbolizes the power of the kingdom and Balla. There is a scene where Balla comes to see the folks of Mahashmati building the gold statue, with the help of animals such as elephants (also generated by computers). Apart from that, a statue resembling a six-handed god is also a digitally created object in the film (refer to Figure 9). The six-handed statue can be seen in the rituals or ceremonies of Balla as Mahashmati kingdom is inherited by King Sivagami. The mighty statue is also seen during the war between the kingdom of Mahashmati and Kalakeya. The statues

taken to the battlefield are symbolic of the splendour and majesty of the Kingdom of Mahashmati. Therefore, the sculptures created in the film symbolize the power and strength of Balla's character and the Kingdom of Mahashmati. It also shows that digitally created objects cab has particular meanings and may be indirectly required by the narrative to develop the storyline and characters.



Figure 9: Sculptures in Baahubali: The Beginning (2015)

Apart from sculptures, DVFx is also used to create other objects such as weapons and interiors. For example, in *Baahubali: The Beginning* there is also a scene where Shiva uses a substantial red cloth and is coated with gasoline and flown to Kalakeya's army. Once the fabric reaches the enemy, fiery arrows are aimed at the cloth to burn all the soldiers. In *Mad Max: Fury Road* (2015) modified vehicles and background settings are also produced using DVFx especially tankers guided by Furiosa. DVFx were used in the scene when Immortan Joe's followers dropped the tanker using a crane for use by Furiosa in the search for oil at Gas Town. Apart from that, vehicles such as yachts are also among the objects produced using DVFx. In *The Great Gatsby* (2013), Gatsby's luxury yacht was created as a prop to support Gatsby's character who lives in luxury.

In conclusion, DVFx is creatively used to create characters and creatures, backgrounds and time settings as well as props and objects that support the construction of fantasy. Without DVFx it would be impossible to create ghost spirits, animals as well as characters with distinctive physical characteristics. Settings in ancient times and futuristic elements such as space can be produced through DVFx. Props and custom objects are also created elements that help strengthen the story and enhance the narrative. The following analysis will evaluate the DVFx used in creative simulations in the films.

*Creative Simulation*
In this second analysis, the focus of the exploration will be on the use of DFVx in creative simulations. Creative simulation in this research means any scene produced using DVFx because the action would be harmful, complicated or costly if it was done in a 'real' or 'natural' situation during the production. The assessed elements in this analysis are action scenes or stunts, explosions, murder and death scenes, and any form of a natural disaster such as rain, storms and so forth.

*a. Digital Multitude*
The first creative simulation analysed in this section is the 'digital multitude' described by Whissel (2014). Digital multitude refers to computer-generated armies, swarms, armadas and hordes that are produced to highlight massive quantities of people, with as many as hundreds

of thousands of digital beings. The use of digital multitude is cost-effective because creating a scene with many additional actors is very expensive. Digital multitude scenes were seen in *Baahubali: The Beginning* (2015) and *Mad Max: Fury Road* (2015). All the 'digital multitudes' in the films appear in scenes of war with a large number of armies and soldiers to symbolize strength and power. The most effective use of DVFx for a digital multitude is in *Baahubali: The Beginning* (2015) in Baahubali's battle of Balla, which attempted to defend the Mahashmati Kingdom from Kalakey's attack (refer to Figure 10).



Figure 10: Digital Multitude in Baahubali: The Beginning (2015)

Creative simulations are used in the scene to create the forces in the battle as they struggle for power. The scene shows Queen Sivagami wanting to see Baahubali's and Balla's strategy against the enemy of King Kalakeya. The most exciting scene shows Baahubali searching for a large cloth to burn the Kalayese army. While in *Mad Max: Fury Road* (2015), a digital multitude features in a scene of people who became slaves to Immortal Joe looking forward to water flowing from a dam (refer to Figure 11).



Figure 11: Digital Multitudes in Mad Max: Fury Road (2015)

The film also features a militant group led by Immortal Joe and the War Boys army, also produced through the use of DVFx. As mentioned earlier, apart from reducing production costs, a digital multitude in a film is a representation of the power and strength of a character in the film. Hence, not surprisingly, many of the digital multitude scenes involve actions such as battles between the two tribes as proof of power and strength.

*b. Explosions and Blood*
The analysis also found that most of the movies used DVFx in shootings and explosions scenes. The investigation also found that shootings and explosions are widely used in action and adventure genre movies. Shooting scenes take place in films such as *Cicakman 3* (2015), *Dhoom 3* (2014), *Baahubali; The Beginning* (2015), *Mad Max: Fury Road* (2015) and *The Great*

*Gatsby* (2013). DVFx is also widely used for explosive action involving destroying buildings, battle action, and the war in space. Most films from India dare to use imagination in such scenes. *Dhoom 3* (2014) features action scenes in which Sahir escapes from the police using a motorcycle that can run on a rope and can turn into a jet ski when in the water. In this scene, DVFx is used when police cars and bank buildings are damaged as well as for guns firing. Also, there is a scene in which Sahir runs vertically up the Bank of Chicago building with many flying pieces in the background. The creative simulation can provide realism and logic for audiences because it suits the scene's entertainment and action demands.

Next, scenes of injuries and bleeding are amongst the most horrific scenes for the audience. As such, the duration of such simulations is not much longer than shootings or explosions. In this study, injuries and bleeding events are used in the production of action genre movies such as *Mad Max: Fury Road* (2015) and *Baahubali The Beginning* (2015). Drama genre movie, *The Great Gatsby* (2013) also uses this kind of creative simulation but only involve minor injuries.

*c. Natural Disasters*

Productions from all three countries use DVFx well for creative simulations. The Australian productions, in particular, demonstrate more realistic and convincing simulations primarily in the creation of natural disasters. This is evident in the three Australian films, which creatively use creative simulations for scenes involving nature such as sandstorms in *Mad Max: Fury Road* (2015). In this movie, when Max and Furiosa escape from the War Boys, DVFx creative simulation is used to create a sandstorm in the desert and lightning strikes. The same quality is also shown at the start of the film when there is a scene showing a dark area destroying the trees growing in the area. The condition has caused the area to become a desert. The vehicles pursuits and explosions in the film are much better than in the other films and the film lifts the narrative basis of the action genre.



Figure 12: Sandstorm Simulation in Mad Max: Fury Road (Australia, 2015)

In the movie *The Great Gatsby* (2013), creative simulations are used to show seasonal changes throughout the storytelling. Season changes, especially winter, are visible and comparable as the scenes use Gatsby's luxurious house backdrop as a permanent object. Gatsby's flashback to when he was a little boy left in a boat and forced to weather the turbulent sea at night also showed excellent and convincing creative simulation. Overall, the use of DVFx for creative simulation, as discussed, has shown the difference in the quality of usage among the three countries. The best quality creative simulation is shown in films from Australia in the creation of weather conditions and aspects of destruction or disaster. Films from India and Malaysia have elements with little photorealism or logic, but these produced

scenes are still able to support the presented narrative. The following analysis will evaluate the use of DVFx to enhance the visual elements of the analysed films.

*Visual Enhancement*

In this section, the analysis will focus on the use of DVFx to generate visual improvements such as the use of animation in the opening titles, transitions, and certain other scenes. The opening title is a must-have element in a movie. The opening title is usually used before the start of the opening act or after the opening act, and before the start of act one. Typically, the opening title will take less than five seconds before the start of the next scene. Based on the analysis, more than 80% of the films in this study use 3D and 2D animation styles in their opening film titles. The type of animated presentation also depends on the story genre. For example, action films such as *Mad Max: Fury Road* (2015) *and Baahubali: The Beginning* (2015) use 'hard' elements and suspense in the creation of their opening titles such as the selection of font style and dark colours. The animation is different from movies in the drama genre such as *The Great Gatsby* (2013), which do not focus on DVFx usage for the opening elements but focus on transitional elements instead.

Apart from the opening title, animated DVFx is also used in the transition from one scene to another. Various forms of animation are used. For example, *Cicakman 3* (2015) use an animation of the front page of a newspaper as a creative visual presentation and enhancement to the conclusions of the plot occurring in a specific scene before the start of a new scene. The use of the transition in *Cicakman 3* (2015) further features creative elements through the use of comic templates, which are commonly used in Marvel comic films.
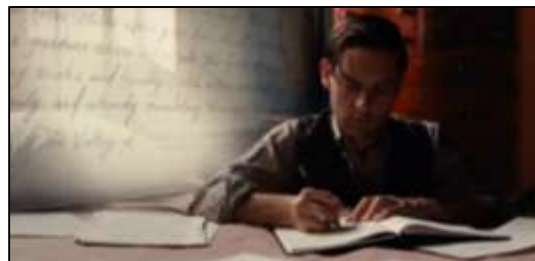


Figure 13: Examples of the Use of Animation in The Great Gatsby (2013)

Historical films *Baahubali: The Beginning* (2015) also use graphic animations of maps as a transition element and visual enhancement to illustrate the journey of a character. *The Great Gatsby* (2013) from Australia uniquely presents a graphic through the backdrop of Nick's dialogue in a frame. In the scene, Nick's dialogue is included in the form of animations to facilitate the audience reading the contents of the letter written by Nick.

## CONCLUSION

According to Yoke Ling, Mohd Nor Shahizan Ali and Normah Mustaffa (2019) the acceptance and interpretation of the media text are important in the successfulness of communication process. Thus, the usage of DVFx also indicated the process of message delivery to the audience interpretations. Based on the analysis, DVFx technology has performed many functions in Malaysia, India and Australia's film industries, both in narrative enhancement and visual performance. The trend analysis indirectly demonstrated that the use of technology such as DVFx for visual performance and narrative enhancement has irreversibly

altered the relationship between cinema spectators and film text. This has been proven through structural analysis and iconographic analysis in this study.

First, the structural analysis in this study has shown that the classification of the genre and narrative structure in the film sample can be performed using DVFx scenes. For example, most movies using DVFx for creation of place and time backgrounds, fantasy elements and simulations, creatures and props have simplified the process of identifying genres and narratives in the selected film samples rather than relying solely on scripts. Wehrmann and Barros (2017) state that genre classification in a film is a multi-label problem because it cannot be directly pinpointed from a single movie frame. So the findings of this analysis have proven that DVFx can serve as a tool in identifying the genre of a film. Secondly, viewing the movie scenes using DVFx as the text provides a new perspective on imaginative analysis, which represents 'realism' in real movies and realities. The iconographic analysis showed that DVFx contributes to the cinematic experience in each sample film in each country. The analysis also showed that most movies that use DVFx for character creation use computer-generated imagery (CGI) techniques. This trend demonstrates the potential for future films to lift critical characters through the use of DVFx, no longer focusing on actual actors.

Hence, as a whole, the film industries in Malaysia, India and Australia have shown the development of stunning DVFx techniques especially in narrative enhancement and visual performance. The findings in this chapter demonstrate the progress of the DVFx industry and the potential that exists. This can be seen in the techno-creativity and narrative enhancement tools used in the selected films. The next chapter will discuss the findings obtained through interviews with DVFx experts to examine the potential of DVFx as tools and support among visual effects experts and artists within the film industries in Malaysia, India and Australia. Consequently, the three frameworks and functions of DVFx introduced by Venkatasawmy (2012) have shown that the use of DVFx in the analysed films demonstrates the increasing use of DVFx and the quality of use within each country, especially in films from Malaysia which have the potential to develop further.

## BIODATA

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