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RESEARCH ARTICLE

# Cinemagraph: A Fusion of Still Images and Motion Video for Science Communication in a New Media Convergent Ecosystem

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**ABSTRACT**

The paper focuses on utilising new media communication tools — 'Cinemagraph' — in creating a new horizon in science communication with a potential to boost scientific temper. The usefulness of this medium lies in its ability to run without any specific player; it requires low internet bandwidths to download and can be played on new media devices with minimal resources. Technically, Cinemagraph is a still image medium but portions of the image are set in motion in a continual loop. This motion must follow the same trajectory, which is usually 2 to 4 seconds in duration. Aesthetically, it is not just a mere hybrid of still and motion as it evokes arousal and has the attention arresting quality of a video and the memory of a still image. The paper takes a look at the uniqueness of the Cinemagraph that has the subtlety of 'focussed movement' captured and played consistently in the picture. This distinguishes it from both a still photograph and a moving video or animation. These qualities of a Cinemagraph have facilitated its utilisation by international brands as an effective tool of social media marketing and out of home advertising and is expected to capture the domestic and global advertising market very soon.

**Keywords:** Cinemagraphs, Living Photos, Animated .gifs, Motion Pictures, Flixel, Aesthetics, Media Convergence, Social Media Marketing, Scientific Temper

## Introduction

One of the new developments in science communication is to use social and convergence media to spread scientific temper to the masses. One of the newest media products is the 'Cinemagraph',

a new medium that artistically utilises the best of stills and a video in a picture. Cinemagraph is a still frame with one or more portions of the image set in naturalistic motion, seamlessly looped without any visible jumps or breaks (James Tompkin, 2014). The motion must follow the same trajectory and the starting and ending frame must be the same.

While most of the image is still, a subtle, repeated movement of one or more objects in the foreground or the background creates an illusion of a living frame. It is sometimes called a 'living photo' (Adler, 2015). Therefore, cinemagraph is considered as a balanced and seamless hybridization of stillness and motion in a way that is aesthetically pleasing, easy to assimilate, memorise and visually engaging. It is a photograph with living moment inside it (Burg, 2014). It is usually created in the form of an animated .gif sequence. Besides, it can also be produced in the MPEG 4 format.

### *A Better Medium for Advertisers*

Cinemagraphs are being extensively used as advertising vehicles on social media platforms, specifically Facebook and Tumblr. It is a medium of the future and its usage may get diversified in the field of science communication. According to Flixel[1], ads that utilize cinemagraphs have 5.6 times the click-through rate than the conventional still image ads (Dawes, 2016).

A Cinemagraph works where a video and still imagery individually fail to serve the purpose of the advertisers. The target groups have to invest more time, attention and intellect to understand a video ad or a still image ad. On the contrary, a Cinemagraph has a sense of immediacy and the surprise of an 'isolated movement' (Burg, 2014). In a Cinemagraph, the attention of the consumer is not distracted by motion; rather motion builds up the interest and retention levels. If we look at an example of a video of someone blowing up a balloon that bursts over inflation, the consumers would invest some of their attention in looking and decoding how the balloon is being

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[1] A Canada-based company that designs user friendly applications for creating Cinemagraphs.

inflated. The consumers would have less mental recourses to understand and remember the different shapes that the balloon takes and how it bursts eventually.

Seamless movement on a continuous loop enlivens the picture. Such a picture is neither distracting nor disturbing and holds the potential of being consumed for a longer time. This is what makes the Cinemagraph an appropriate medium for advertising and social media marketing. In the coming future, this medium could be globally accepted as a vehicle for advertising and science communication (Dua, 2016).

A Cinemagraph presents more than what a photograph and a video can offer. It conveys the arousal of a video and the memory of a still photo. This medium has a unique attention grabbing quality in itself. While most of the space in the picture is still, a subtle and continual movement is inserted only in the portion where the science communicator intends to focus the attention (e.g. can be a feature of the advertised product) and get remembered by the consumers. In addition, a Cinemagraph file is lighter in size than a video file. Studies have shown that a Cinemagraph can have up to five times more impact than still images on the internet. All this gives Cinemagraph an edge over still images and videos and make it a better medium for science communication than others.

Creative use of colours to separate foreground and background can affect the emotional appeal of a Cinemagraph (Lin, 2014). For example, use of black and white colour scheme for the still image and colours for the portion of the picture requiring viewer attention. The science communicator needs to remain cautious of maintaining a reasonable balance between stillness and motion within a Cinemagraph. Mindless insertion of motion can break the attraction and as a result, the Cinemagraph may not have a long lasting impression on the consumer's mind. Moreover, the alteration in the portion of picture in motion and the speed of motion within a picture can also affect the consumers in multiple ways (Sundar and Kalyanaraman, 2004).

## The Art and Science of Creating a Cinemagraph

Creating a Cinemagraph is both an art and a science. On the aesthetic level, it is about striking the appropriate emotional chord with the target group; it deals with the techniques of shooting and editing for tailoring a useful end-product. The aesthetics of Cinemagraph involve selecting a good composition, the creative play with colours that convey the mood of the scene (Bridges, 2016). As the eye immediately focuses on the moving portion, it should look convincing and help in persuading the consumer to understand the intended. For instance, let me recall a coca cola advertisement done using a Cinemagraph. In the scorching summers, a Cinemagraph ad of Coca Cola can work wonders. It places a red Coca Cola can at the centre of the frame with the background of contrasting blue water set in motion. Such an aesthetical use of colours and selecting the apt area for motion would instigate the consumers to grab a Coca Cola.

## Essentials of a Cinemagraph

Considering the scientific process and the technical aspects of creating a Cinemagraph, three fundamental parameters are involved: (1) a continual motion, (2) the trajectory of motion and (3) the stillness of the frame in a Cinemagraph. There is a systematic process of creating a Cinemagraph which begins with planning the motion i.e. selecting a subject in the scene where the majority of the image is still and a small element is moving. There has to be a visible separation between the still and the moving without any overlaps. Motion can be selected using two types of loops — Bounce Loop and Repeat Loop. The bounce loop plays the motion till the end and then plays it reverse (Adler, 2015). For example, opening and closing of eyes. The repeat loop plays the motion from start to end and then begins in the same fashion for an endless repetition. The starting to the end frame needs to be the same. The motion starts and stops at the same place as the potter's wheel or action. It follows a definitive trajectory start and end of the frame. For example, a car is crossing in and out of the frame. The loop has to be selected very carefully depending on the visual and it should be used to lend a seamless and natural look to the motion, without any abrupt jumps.

The second step is planning the concept — an idea that is conceptualized keeping in view the purpose and interests of the target consumers of the Cinemagraph. The preparation for the shoot of a Cinemagraph has certain considerations like shooting on a steady tripod to make sure the camera does not shake; video settings to shoot in highest resolution permissible by the camera for a high quality video and a low ISO[2] to reduce noise. Other Cinemagraph considerations include shooting in stable lighting conditions without dramatic or flickering alterations.

**Processing the Cinemagraph**

After shooting, the still frame for Cinemagraph is culled out of the video in post, using video editing software in conjunction with a photo editing software (used for making colour corrections). Alternatively, there are several mobile and online applications available on Android, Apple and Windows platform which simplify the process but with considerable limitations.

**File Formats for Cinemagraph**

The editing completes the process after which the Cinemagraph can be saved and shared using .gif file formats on the social media platforms. Jamie Beck and Kevin Burg (2011) created the Cinemagraph using the animated .gif format which is widely used so far.

Creating Cinemagraphs in animated .gif file format has several advantages. First, the file size is very small. Second, it does not require any media player to be played on a browser. The only flip side is that the .gif file can display a maximum of 256 colours only. However, this format can be quite useful because it can be played in low bandwidth application (Lin, 2014). Moreover, it is also useful if it has to run on hand-held devices. 4 k video is the upcoming option in the latest digital cameras that allows shooting higher resolution and more informative Cinemagraphs (Adler, 2015). Of course, using a video format would require the use of a media player and produce a much heavier file in size than a .gif file. However, the

[2] The sensitivity of camera to available light.

file size would be much lower if the video clip was used for a comparable duration of consumption of the visual.

## Conclusion

Cinemagraph is not just a hybrid in visual imagery but much more than that. Given the attention arresting quality (leading to arousal) without an element of distraction, Cinemagraph has an upper hand over photo and video technology. As there is no distraction in motion, rather an elevation of interest, this new medium has the potential to boost the marketing strategies of the advertisers who can use it as a tool for social media marketing and out of home (OOH) advertising. It would be beneficial for the new science communicators to systematically learn and practice the art and science of creating Cinemagraphs within the academic domain first, because after completing hands-on training, these science communicators can become competent to professionally design Cinemagraphs that serve the advertising and sponsoring companies' purposes effectively. Therefore, it would be useful to insert Cinemagraphy as a module in the academic courses to create awareness and creative use of this application. Moreover, it would promote research and development in this field on the domestic front. This new science communication technology may expand its reach from the West to the rest of the world, very soon.

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