

Marina Klimova
T.Yu.Vvedenska, research supervisor
T.Yu.Vvedenska, language adviser
SHEI «National Mining University», Dnipropetrovsk

Recent Technological Innovations in Cinema

Movies are experiencing nothing short of a revolution in technology. In the years since the early 80's, cinema techniques and technology have come an incredibly long way. Today, we can introduce such types of technological innovations in cinema.

One of the most exciting advancements in cinema is the use of higher frame rates. This technology is being driven by content creators like James Cameron and Peter Jackson who want to capitalize on the increased clarity possible through increased frame rates. For decades, 35mm film utilized a 24 FPS frame rate. This was the maximum practical speed that could be achieved for film running through a projector. With digital, there is no longer a need to limit the creative community. Peter Jackson shot *The Hobbit* at 48 FPS. Though the broad landscape shots were spectacular, the presentation was not as satisfying for more intimate scenes. However, this choice should be left to the content creators to determine the best way to convey their stories. Version 2 digital projectors can be upgraded to accommodate higher frame rates by replacing the integrated media block.

Another arresting innovation in cinema is 3D effect. Three-dimensional technology is the ability to add the appearance of depth to a flat image, typically when viewed through special viewing glasses has been the movie industry's answer to outside competition on and off for more than 50 years. 3D technology makes full of the different viewing angles of our right eye and left eye to the same object in order to create two layers of images in our mind. After that, the illusion of 3D images comes out. The development of 3D movie promotes technological innovations of 3D. In order to make movies with anaglyph 3D attached, two cameras, equipped with red and blue filters, are required. With this method, an image will consist of red color layer and blue color layer. When watching anaglyph 3D movie, a pair of red/blue anaglyph glasses is required. The red color layer will go to left eye while the blue color layer to right eye to create 3D effect.

People are reluctant to wear glasses and then glass-free 3D technology is adopted. Auto-Stereoscopic displays display different pixels to each eye, using optics (lenses or barriers) to direct the correct pixels to each eye. Glass-free 3D technology is still so immature that its application scope is limited. However, two 3D mobiles with glass-free technology are available in the market at present so you can buy them to experience the effect of this technology.