Animation graphics in the presentation

Umarkhon Sobitovich Mukhamedov

senior lecturer of the department "Informatics and management", National Institute of Fine art and design named after Kamoliddin Behzod

---***---

Abstract: This article covers the basics of working with GIF Animator and Animate Me! With their help, you can create quite interesting animations that can be used in web-design and presentations, giving our work great visibility and individuality. This, of course, increases the effectiveness of the perception of the information conveyed to the right audience. The principles of creating GIF-animation, methods of their optimization, as well as knowledge of the structure of a GIF-file will help us achieve our goals.

***Keywords:** 2D and 3D animation, GIF images, Animation Creation, Microsoft PowerPoint*

Among the most important advantages of multimedia technologies, it should be noted that they can be used to create interactive presentations for business, educational or representative purposes. The data that needs to be made available to a wide audience is presented in the most visual and convincing form. In this case, the viewer ceases to be a passive recipient of information and becomes an active participant in the process. Typically, modern presentations include high-quality graphics and video images, soundtracks and various effects.

In work, I want to consider the basic principles of creating animated images, features of 2D and 3D animation, we will dwell in great detail on the most popular GIF graphic format for creating animation and web design, its structure, and ways to optimize GIF images. We will also talk about the basics of working in two convenient, in my opinion, programs Animation Creation: GIF Animator and Animate Me!

Currently, there are quite a few different programs on the software market for the development and conduct of multimedia presentations. First of all, it should be said about the Microsoft PowerPoint program included with Microsoft Office. Such programs as Astound and Animation Works Interactive by Gold Disk, Aldus Persuasion, Asymetrix Compel, Action! and a number of others.

Almost all of these programs allow you to implement in a presentation features such as transition effects and slide construction, support for full animation and interactive controls. Transition and slide building effects are effects such as dissolve, disintegrate, wipe, and others. Full animation is built-in animation support. Some programs do not contain them, but they allow you to import animated objects (for example, GIF files) prepared in other applications.

Interactive controls - the ability to place active objects on the screen when creating a presentation, allowing you to initiate the launch of a process (slide transition, launching an application, playing audio or video clips, opening a document, and so on).

The term : "animation" literally means "animating" an image. The theory of animation is based on the physiological feature of the human eye - the ability to keep a trace of what he saw on the retina and combine rapidly changing images into a single visual series. The inertia of vision creates the illusion of continuous movement. Minimum change frequency images, in which the viewer perceives changes in objects as smooth and continuous, is called the lower boundary of continuous perception of the visual range. In this case, the upper reaction is determined by the reaction of the human brain to the changes taking place, the ability to understand the meaning of the transmitted information. These circumstances are taken into account in the visual reproduction of dynamic processes using various technical means.

The frame rate per second of screen time is:

• 12-16 - for computer animation (depending on the tasks to be solved and the software used);

• 24 - for classic cinema;

• 25 - for PAL broadcasting system;

• 30 - for the NTSC broadcasting system;

In addition, multimedia products often use animated images that should not initially be perceived by the viewer as visuals (advertising banners, some video effects). For such images, the frame rate can be quite low (1 frame per few seconds).

Distinguish between animation in space (3D animation) and animation of flat images (2D animation).

3D animation techniques are widely used in video and film production.

3D animation begins with the creation of 3D computer models of objects. At the first stage, a wireframe model of the future scene is formed from a set of flat faces with an infinitesimal thickness. Straight line boundaries of faces are described by coordinates in three-dimensional space. The next step is to cover the surface with two-dimensional images (textures) that correspond to the appearance of this or that material. In this case, other surface properties can be taken into account - gloss, reflections, transparency, etc. Further, the arrangement of light sources and cameras is carried out (determination of viewpoints), the characteristics of the translational and rotational motion of objects and their components are set.

The final stage is rendering of the scene. At the same time, for each frame, the visibility of objects and their parts is determined, the characteristics of materials, the influence of light sources are taken into account. The result is a sequence of static bitmaps that, when played at a certain speed, create complex 3D animations.

2D animation can be conditionally divided by the way of implementation (playback) into the following categories:

• classic frame-by-frame animation;

• sprite software animation;

• special animation;

Frame-by-frame animation (cel-animation) is based on alternating pictures, each of which is drawn separately (the principle of animation). Each new cel-image differs from the previous one, which, in fact, is perceived as movement.

Cell images can move over a static background in a trajectory, user-defined. Modern animation programs allow you to generate missing frames between a user-defined start and end. This process is called tweening. Various optical effects, demorphization, color cycling are also applied to computer images. A rather strong effect is morphing, which consists in smoothly transforming one object into another (for example, an image of a car into an image of a flying bird).

A classic example of a program for creating computer animation using time-lapse technology is Autodesk Animator. The FLI computer animation recording format developed by Autodesk is now supported by many programs and allows you to save information with a resolution of 320×200 pixels. Further development of the FLI format - the FLC format, first used in Autodesk Animator Pro. It allows you to work with a resolution of 1280x1024. FLI and FLC formats provide a maximum 8-bit color depth and do not support compression.

Sprite animation is implemented using a programming language or special tool. There is no concept of a frame in sprite animation (this technology is used in many "two-dimensional" computer games).

Let us dwell in particular on a special 2D animation technology based on the recording of a series of control and graphic codes in GIF files and subsequent reproduction of a number of images at programmed time intervals.

References

1. Umida Gulomovna Zunnunova Sayyora Abdulhakovna Zakirova, Lelia Rus Pîrvan, CHALLENGES AND PROSPECTS IN ART HIGHER EDUCATION OF UZBEKISTAN AND ROMANIA, European Journal of Research and Reflection in Educational Sciences (EJRRES), 2020,V 8, 10

2. Turabek Raufovich Fayziyev Umida Gulomovna Zunnunova , Sayyora Abdulhakovna Zakirova, ACADEMIC AND ORGANIZATIONAL ASPECTS OF ENTREPRENEURSHIP EDUCATION IN ART UNIVERSITIES OF UZBEKISTAN, JOURNAL OF CRITICAL REVIEWS, 2020, V 7, 19

3. Sayyora Abdulhakovna Zakirova, COMPUTER GRAPHICS AS A TOOL FOR THE DEVELOPMENT OF STUDENTS' CREATIVE AND INTELLECTUAL ABILITIES IN CLASSES ON THE BASICS OF INFORMATION TECHNOLOGY, ACADEMICIA A n I n t e r n a t i o n a l M u l t i d i s c i p l i n a r y R e s e a r c h J o u r n a l (Double Blind Refereed & Reviewed International Journal), 2020, V 10, 6

4. Zakirova Sayyora Abdulhakovna, The Role of IT-Management in the Development of Information Technologies, International Journal of Advanced Research in Science, Engineering and Technology, India, National Institute of Science Communication and Information Resources, 2020, V 7,2

5. Tuyboevna, K. S. (2020). Interactive method – one of the most popular types of today's pedagogical technologies. European Journal of Research and Reflection in Educational Sciences, 8 (11), Part II, 83-92.

6. Karimova Sanobar Tuyboevna. (2020). Using the educational electronic resource phet in the teaching of physics. ACADEMICIA: An International Multidisciplinary Research Journal. 10 (6). 1424-1426.

7. Karimova Sanobar Tuyboevna. (2021). About the use of interactive method and phet electronic resource in educational process. Middle European Scientific Bulletin, 8. https://doi.org/10.47494/mesb.2021.2.164

1. Abdullaeva Nasiba Burronovna. (2020). Integration Of Scientific And Rational And Artistic And Aesthetic Aspects In Design And Art. International Journal of Advanced Science and Technology, 29(8s), 1334 - 1336.

2. NafosatZikirova,Nasiba Abdullayeva, Ozoda Nishanova, Baktior Djalilov, Enajon Nishanbayeva. (2020). Issues On Using Interactive Strategies In Teaching Process. Journal of Advanced Research in Dynamical and Control Systems, 12 (02), 2753-2756.

3. Nafosat, Z., Nasiba, A., Ozoda, N., Baktior, D., & Enajon, N. (2019). Interactive strategies and methods of education.

4. Abdullaeva, N. B. (2015). THE ESSENCE AND CONTENT OF THE AESTHETIC COMPONENT IN DESIGN. *ISJ Theoretical & Applied Science*, *9*(29), 169-171.

5. Абдуллаева, Б. (2014). Диалектическое видение эстетического компонента в дизайне. *Credo new*, (3), 14-14.

6. Абдуллаева, Н. Б Дизайн как фактор формирования культурного пространства. Фалсафа ва ҳуқуқ, 2/4/2017, 70-72.

7. KAMALOVNA, N. T., KHABIBOVNA, G. M., AKHMEDOVNA, N. M., MUKHTORJANOVNA, L. N., & KIZI, Z. H. O. (2020). MECHANISMS OF

IMPROVING SOCIAL PROTECTION OF WOMEN: RISK INDICATORS AND STATISTICS (IN THE CONTEXT OF GENDER-BASED VIOLENCE). *Journal of Critical Reviews*, 7(4), 38-41.

8. Nurmatova, M. A. (2014). Nekotoryie osobennosty dukhovno-nravstvennogo vospitaniia studentov meditsynskikh vuzov [Some peculiarities of spiritual and moral education of medical university students]. *Molodoi uchenyi [Young scientist]*, 6, 868-870..