

WEB DESIGN ANIMATION

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It is currently difficult to imagine life without a network. A person finds most of the necessary information on the Internet, an important role is played by virtual communication in social networks, the exchange of experience through blogs, forums, and interest sites. Some of the everyday household tasks are also taken over by the Internet, for example, making purchases in online stores, making an appointment with a doctor through the clinic's website. In this regard, there is a problem of aesthetic and functional organization of the Internet space. This problem is solved by means of web design, and animation is one of the most effective.

The purpose of the study is to identify the features of animation in web design.

Material and methods. The research materials are websites on the Internet, mobile applications, electronic articles on animation in web design. Research methods are: system-structural analysis, comparative analysis, observation, description.

Findings and their discussion. A virtual space containing a huge amount of heterogeneous information needs to be streamlined in the same way as the real one. The competent organization of the Internet space is engaged in such a sphere of communicative design as web design.

Web design is the process of creating user interfaces for Internet sites and mobile applications, taking into account their functional and aesthetic side, as well as the result of this process. At the same time, the structure of the web page and the hierarchy of the content are built in accordance with the logic of the information. In modern web design, there is a clear tendency to create a project on the principles of ergonomics, taking into account the features of user behavior, intuitively clear in interaction.

There are many expressive tools in the arsenal of a web designer. Classical, traditional – color, compositional techniques, and relatively new to use - animation.

Computer animation in the broad sense is the effect of sequential multimedia endowment of the image with motion functions.

The history of animation in web design began in the 1980s with the advent of moving images in the Gif format, which were placed on the site with the aim of “animating” the web space and adding dynamics. Later, Flash multimedia technology appeared, which has more features related to color, sound, thanks to which the animation has become interactive. The developers were able to create entire cartoons on the sites, which sometimes created visual overload and slowed down the page. At that time, animation was not considered a means of improving the usability of the site and was added only for decoration [1].

However, animation, like any other element in web design, should be used for a specific purpose and perform some useful function. Functional animation usually refers to subtle interactive animations of the user interface. It usually does not carry an independent semantic load, and is only a link in the user's interaction with the site. Appropriate web animation helps in the work, draws attention to important details, reports on some page states.

Animation effects can be used, for example, to show the user what elements on the site you can work with. When hovering, the button may be highlighted, or change color. Also, with the help of animation, you can show that the operation necessary for the user has been completed. For example, an animation of an envelope when sending a letter to a mail site.

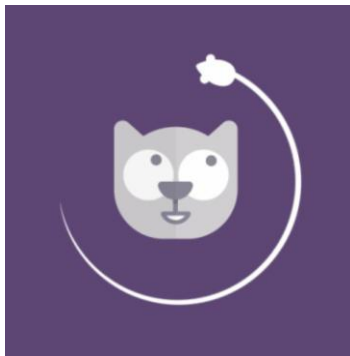


Figure 1. Cat watching a mouse running in a circle – an entertaining moment in the wait animation

Using animation, you can show the process of loading the page, so the user will understand that something is happening on the page and you need to wait. Classical loading animation - elements appearing alternately in a circle, or a line running in a circle. Adding an entertaining moment to the animation will not let the user get bored while waiting (Figure 1).

The use of animation to draw attention to certain elements of the site is justified. For example, to notify of an error when entering data, login or password, sometimes they use the effect of jittering the data entry form like a negative head-shake, so that the user understands that something is going wrong [2]. Animated effects are also warranted to indicate the completion of a desired action. An example is the animation on Pinterest.com in the form of an appearing circle inviting you to click on the link for more information.

Smooth animation of transitions between page states is possible, since smooth scrolling, soft content changes are more pleasing to the eye and easier to perceive.

There is such a technique as storytelling through animation. When scrolling down the page, step-by-step animation of images and text is activated in order to talk about the product to which the site is dedicated.

Any animation on the site should attract to be moderate in terms of catchiness and time. This is especially true of the elements with which the user works most often.

Conclusion. During the study, information resources on the topic of animation in web design were studied, examples of websites were considered. We can conclude that animation is not just a decorative and entertaining element of the site. It is part of a connected functioning system, organically inscribed in it by a part, also bearing a certain function. The use of animation on web pages should have a clearly defined goal, and increase the efficiency of using the site.

1. Web animation: where and why? [electronic resource]. Access Mode: <https://habr.com/ru/company/ruvds/blog/321822/>. Access Date: 11/07/2019.
2. A Complete Guide to Web Animation, article. [electronic resource]. Access Mode: <https://yandex.com/turbo?text=https%3A%2F%2Fwww.internet-technologies.ru%2Farticles%2Fpolnoe-rukovodstvo-po-veb-animacii.html> Date of access: 11/08/2019.

IMMERSIVE 3D VISUALIZATION IN REAL TIME

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In the process of design design, the result of the work is the presentation of the project to the customer. In the period of fierce competition in the labor market, the competitive advantage is the implementation of the project submission in the most effective way. Epic Games in 2019 announced the acquisition of Twinmotion, a software package for high-quality visualization of the interior and exterior in real time, positioning it as a simple and intuitive visualizer based on the Unreal Engine 4 engine as a technical base [1]. However, until November 2019, Twinmotion was distributed free of charge. According to the company, this package allows you to create high-quality animation of a 3-dimensional environment, which, unlike the static representation of the project, has several advantages.

The purpose of the study is to test this product as part of the educational process by identifying its strengths and weaknesses, for further possible implementation in the educational process in the framework of the discipline "Animation in Design"

Material and methods. The material of the study was the educational and creative work of 5th year students of the art and graphic faculty of the design department of Vitebsk State University named after P.M. Masherova. The method of continuous polling and the method of analogies are used.

Finding sand the discussion. Unlike traditional animation programs, the Twinmotion architectural visualization program is built on the Unreal Engine, which is traditionally used in the gaming industry [2]. That raised a number of questions about the possibility of implementation in the educational process, since there was no work experience for students with this approach to visualization architecture. Previously, the entire animation creation process took place in the 3ds max package. This package of 3D modeling is the main one in the preparation of young specialists of the department, but it is the process of creating animation that creates a number of difficulties. Namely: the difficulty of adjusting the process of the camera's flight over the stage, adjusting the camera's parameters, adjusting the visualizer, the long animation time, the inability to view the animation in real time,