

APPLICATION OF DYNAMIC ORNAMENT IN DIGITAL DESIGN

Abstract: This pattern has impact on the human psyche in terms of the collective unconscious. The dynamic ornament in the context of media facades affects the perception of Ukrainian art visualization.

Keywords: dynamic pattern, digital design, symmetry algorithm.

Statement of the problem. In the early nineteenth century manifestation ornaments in mass production was suspended a large growth of machine production. In connection with the first and second world war style flourished as modernism, constructivism and international style, reflecting the possibility of human survival after the war.

Ukrainian ornament as a way to decorate objects design was absent in the engine manufacturing. However, the use of ornaments handicrafts are widely used outside of large cities. Decorating the home is a hot topic because the techniques of ornamentation (embroidery, paper decorations) acquired development.

In the 80 years of the twentieth century postmodernism drew attention to the pattern. In the first decade of the twenty-first century ornamentation has not been given sufficient attention in the creation of design objects. You can predict the resurgence of interest in ornament in relation to the cyclical nature of perception.

Analysis of recent research and publications. G. Weil [1] showed the concept of symmetry in physics and mathematics and its role in science and art. [1] Shubnikov A. Koptsyk [7] described the symmetry in the ornament of intuitive perception to algebraic systems. Hekel E. [3] systematized biological organisms that are dynamic and rhythmic repetition in terms of composition.

The wording of Article goals. Consider using dynamic ornament ornamental grids using symmetry species and to show visual information.

The main part. There is the practice of using natural shapes to create an artistic image. Associative series which is based on the dynamics and rhythms that affect the formation of visual information design objects.

In 1898, biologist Hekel. E displays the value of natural forms in art and mathematics. With scientific papers Hekelya becomes apparent that there is an algorithm that can be defined as the procedure required to create rhythmic elements of the object. Hekel defines a type of plant forms a complex organization that is built on repetition of simple geometric structures. In their studies singled out as the beauty and harmony presented by the emergence of tribal rhythmic process (Fig. 1).

Dynamic pattern, is a subspecies of graphic design, which changes its characteristics. The use of dynamic objects ornament on mass communication serves as the vyzovu attract attention and curiosity. Due to the symmetry transformation principles of dynamic ornament in any geometric shape information is taken quickly.



Figure 1. Detection rate in natural organisms

To demonstrate the dynamic ornament on mass communication using different types of symmetry - dynamic, static, axial, central, translational, rotating, mirror, mirror-rotating, dissimetrii.

Create dynamic ornaments greatly simplified by using the algorithm. Motif as the main element of a closed projection system itself is a closed section of the plane. Curves that form the border motif, also have this property. The number can vary from two to four couples. Each curve turns rhythmic and metric elements in the use of modern technology.

Any pattern is given a motive built into the unit cell, and the manner of its movement on an infinite plane. Breakdown of the plane at the level of the shape and size of a cell using orthogonal transformation (rotation, reflection and translation) makes it possible to build interesting geometric patterns, a wide area of use which is the decoration of architectural and design (Fig. 2.a).

This cell forms a valid network. Building dynamic ornaments based on a structured grid, which are set algorithmic steps - turn, transfers and symmetric mappings. Grates are of two types: rectangular lattice - dividing plane parallel and perpendicular lines, and rhombic - dividing the square diagonals (Fig. 2.a). To make turns necessary to use the system of coordinates and vectors [4].

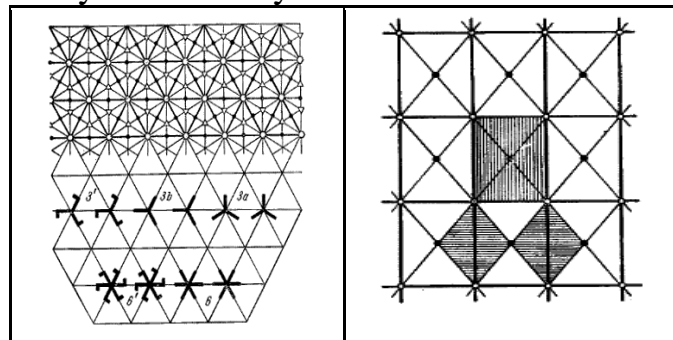


Figure 2. Types of ornamental grilles:

- a) ornamental plane - mirror, translational and rotatory symmetry;
- b) Square - rhombic lattice.

For example, you can use an equilateral triangle which passed by a mirror transformation, and dynamic translational symmetry (Fig. 3).

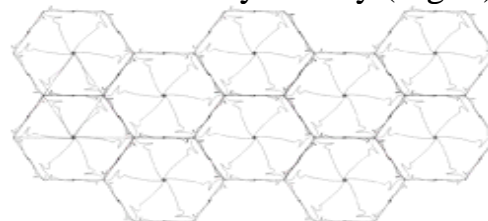


Figure 3. Convert triangle

The transformation of the triangle can be used when creating dynamic algorithms ornament that can be applied to objects of the media. To date, there are options for design of buildings using digital technology. Among them distinguish media facades.

Media facades are composed of hundreds of thousands of LED RGB, which are integrated into the architectural frontage and transmit video images are managed by a computer program. Unlike neon highlights, light facades forming almost architectural appearance of the object in the dark. Implementing dynamic ornament is based on computer processes, which are given vectors. Twists and reflection vectors aimed at building a visual image of the ornament.

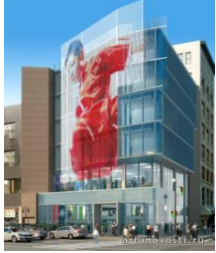




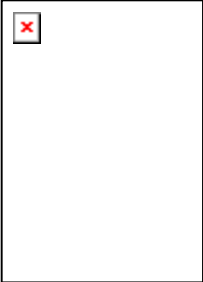


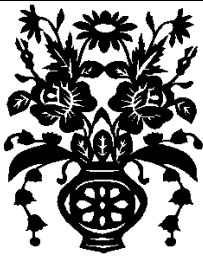
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ABS Partners Real Estate LLC. First Pioneer Properties, 2009	Qi frovyy facade on the square songs. Italy 2003.	You tynanka. Mogilev-Podolsk. N. Rudenko - 2005
		
Greenpix Media Wall in Beijing - designer Simon Dzhyostr, 2005	Ma hazyn Chanel in Ginza, Tokyo, architect. - Peter Marin, 2004	Fr ahment towel. Sabadash Coloma. Twentieth century.
		
Pillar architects Realities United .2008	Ba strain «UNIQA» Vienna - arch.Heinz Neumann, 2004	You tynanka. Mogilev-Podolsk. - 2005

Figure 4. Hypothetical application Ukrainian ornamentation on the facade of media

The main goal is to improve media facades of old buildings without destroying them. The basis of media facades are screens using LED modules, projectors, special textile fabric. Using these technologies, elevations may change its visual features, depending on external factors - noise, traffic.

For the perception of Ukrainian art can be used Ukrainian ornament (USD) embroidery or paper decorations. That is a synthesis of national ornament with modern digital technology (Fig. 4).

To date, the urgency is the transformation of paper decorations influenced by the newest art technology. Vitinanka - a form of decorative art that includes narrative and fancy decorations home - and delicate silhouette. This type of ornament is considered a combination that combines other types of ornaments (geometric, zoomorphic, floral).

Using dynamic ornament media - facades convenient that some planes are color and direction. Each area has a specific sequence of actions that must comply with the type of facade.

Conclusions. Implementing dynamic ornament in digital design processes based on ornamental lattice symmetry and forms. It formed a hypothetical application Ukrainian ornamentation on the media - the facades.

Prospects for further research. Use of space-modular ornament paper decorations in the interior and exterior public spaces Ukraine is a task for further research.

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Аннотация

Лобода О. В. Использование динамического орнамента в цифровом дизайне. Орнамент осуществляет воздействие на психику человека с точки зрения коллективного бессознательного. Динамический процесс орнамента в контексте медиа фасадов влияет на визуализацию восприятия украинского искусства.

Ключевые слова: динамический орнамент, цифровой дизайн, симметрия, алгоритм.

Анотація

Лобода О. В. Використання динамічного орнаменту в цифровому дизайні. Орнамент здійснює вплив на психіку людини з точки зору колективного несвідомого. Динамічний процес орнаменту в контексті медіа фасадів впливає на візуалізацію сприйняття українського мистецтва.

Ключові слова: динамічний орнамент, цифровий дизайн, симетрія, алгоритм.