Application Of Information Technologies In Network Mass Communication Media

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Summary
The article examines one of the most important means of visualization of mass information on the Internet - information graphics in the broadest sense of the term as a visual technology for presenting mass information. The main objectives of the article are to determine the genre-typological features of infographics and basic technological principles; identification of features of creation and use of information graphics in modern network.
Certain benefits of online infographic editors include savings in resources and time. They allow the user, who has basic PC skills, to create standardized infographics based on their own data. In addition, the use of online services develops visual thinking, allows you to get an idea of quality criteria and current trends in infographics, as well as to gain initial experience in the visual presentation of data.
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1. Introduction

Modern understanding of communicative processes and phenomena is inextricably linked with the process of inertization of the information space and its digitization - the transformation of information into digital format. The historical evolution of the mass media, accompanied by relentless scientific and technical progress, is realized in terms of the effectiveness of the use of forms and methods of presenting information in networked media. Modern online media as the embodiment of the latest technological capabilities of mankind in the field of mass communication are characterized by a wide variety of forms and means of visualization of information in the production of media content - information content, which through the media is perceived by mass audiences.

Figurative information in the media has come a long way from a purely auxiliary tool in presenting information, including text, to almost the main, and in some cases a self-sufficient multifunctional form. The visual component is one of the foundations of creating a unique style of online media, ie performs an aesthetic function, and most importantly - facilitates the perception, understanding and assimilation of broadcast images by the recipient, makes information more visual and structured, which is especially valuable nowadays when content consumers quick view of media information. In order for visual information to effectively perform its functions, media professionals need to identify and understand the principles of successful information design, sound approaches to the use of visual aids.

Therefore, the relevance of the proposed study is due to the fact that the development of online media is characterized by a global trend of increasing the role of the visual component in the media product. Acquiring online media with unique practices of visual content design needs our research attention.

An important role in the technological process of visualization of media content is played by information graphics - a branch of communicative design, which is based on a graphical representation of the content of information, semantic connections, numerical data and signs. It is used for fast, clear and comprehensive transmission of verbal information and the formation of related visual images. The use of information graphics network ZMK is the subject of our scientific research. It targets various types of online media.
The aim of the study is to study one of the most important means of visualization of mass information on the Internet - information graphics in the broadest sense of the term as a visual technology for presenting mass information. The main objectives of the article are to determine the genre-typological features of infographics and basic

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technological principles; identification of features of creation and use of information graphics in modern network ZMK.

Methodological basis of the study. Research methods include a set of techniques for studying the scientific literature, as well as a theoretical understanding of the practice of infographic activities in terms of conditions for the implementation of modern media. Among the methods used are general scientific, namely: empirical - observation and comparison; empirical and theoretical - analysis and synthesis; theoretical - descriptions. Techniques of classification (typological) analysis were also used.
Theoretical and methodological basis of work. The latest scientific discourse of means of visualization of online media content is well developed in science, but the problem of using information graphics in online media needs research attention. This is due to the fact that, unlike foreign colleagues, who consider infographics as an independent genre in the media environment, Ukrainian theorists often define it as a kind of illustration. Therefore, there is a need for in-depth analysis of the theoretical and methodological framework to identify the functional role of infographics in the media environment, comprehensively explore the technological phenomenon of information graphics, revealing its specificity in the system of other media visualization.

2. Theoretical Consideration

The definition of the term "information graphics" (abbreviated name - "infographics") requires an interpretation of its components: "information" - information, reports on events and phenomena occurring in society, and "graphics" - an independent form of fine art, including drawings and printed artistic images (engraving, lithography, monotype, etc.) based on the art of drawing, which have their own visual means and expressive capabilities. Based on such identifications, it is possible to define the integrated concept of "infographics" as a graphical representation of information.

The terms information graphics and information visualization have existed for some time as identical, synonymous concepts, but in 2010 R. Kosara proved the need to distinguish them in his blog. For example, in The Difference Between Infographics and Visualization, he emphasized: “Visualization is created by a program that can be applied to different data sets. Infographics are individual handiwork for a specific data set. Obviously, this is why it is difficult to understand these differences "[1]. Thus, infographics and data visualization as terminological concepts have different purposes, different users and different development principles.

The universal definition of infographics, which applies to various areas of society (journalism, design, analytics, sociology, economics, politics, etc.) can be considered as follows: "Infographics is an integrated platform that combines different activities. In a narrow sense, infographics is a way of presenting information, which provides an opportunity to integrate different components into a single whole, in a broad sense - it is a fundamentally new way of organizing data in a constantly changing information field "[2].

Despite the ambiguity in the interpretation of the term "infographics" by both domestic and foreign scholars, we consider it as an independent genre, as it has a number of features and properties characteristic of a media work.
From a functional point of view, any infographic should answer traditional questions: what? who? where? When? how? why? Why? In this, infographics converge with traditional media genres, especially information. However, among the genre-forming factors should be mentioned such as symbolization (the ability to convey holistic content through a system of visual images), the integrity of text and images (because infographics - a synthetic genre that represents the unity of text and image), decoding components (audience ability to interpret infographics accordingly to the author's idea) and the game (infographics should be not only informative but also attractive, and, ultimately, not boring).

In order to effectively influence the consciousness of the communicator, the mass media seek to establish and maintain close contact with him through verbal and visual channels of communication. Therefore, the main purpose of the infographic is to influence the recipient to provide feedback to the WMC. Due to this, the informational and communicative purpose of infographics is realized. M. Yakymenko also highlights the entertainment goal, which is also necessary for the consumer as leisure and recreation [3].

D. Podguzov in the article "Infographics as a means of visual communication" emphasizes six types of infographics depending on the nature of information and scope.

Type I is an analytical infographic that provides a variety of statistical and numerical metrics that reflect any relationships or dependencies. This type includes the simplest charts, graphs, histograms.

Type II - news infographics, which includes a competent and visual explanation of news material.

Type III - infographics for presentation is popularized in the growing number of business presentations and business projects.

Type IV - advertising infographics are used to clearly and quickly convey the message about the benefits that will receive the target audience by contacting the proposed goods or services.

Type V - infographic-instruction - an explanation of the device, the principle of operation, sequential steps, actions, or other information that must be communicated to the person to avoid mistakes [4].

One of the typological grounds for the classification of infographics is the way information is displayed. Despite the fact that infographics are understood as countless graphic materials and signs, they can be divided into three categories: graphs and tables that require minimal graphical effort and minimal planning, the main criteria of which are correctly set parameters and analysis criteria, as well as the reliability and completeness of information. Design work is reduced to standard execution and speed; logical schemes and reconstructions (graphic or video reconstructions of events), the quality of which depends not only on reporter literacy, but also on software, pre-designed elements and style systems; graphic stories, which are complex information packages - materials can act in combination with printed packages of documents and independently, and the main criterion is the art of execution [5].

R. Kram in his book "Infographics. Visual representation of data "[6] provides a detailed classification of information graphics by different characteristics. Thus, depending on the complexity, he identifies six types of infographics:

1) static infographics - a simple and fairly common type of infographics, the advantage of which is the ease of distribution online (stored in JPG or PNG format) and the possibility of use in print media;

2) scalable infographics - it can be enlarged for a more detailed study of its elements, such infographics are created on the basis of a large static image, to which are added a scaling element using special web programs;

3) clickable infographics - its structural elements are hyperlinks, when the cursor hovers a computer mouse, which goes to the next page, or opens part of the information associated with this structural element (a variant of this style is a pop-up infographic: to get the viewer does not have to "click" additional information with the mouse button on certain areas of the infographic - the information appears on the screen when you hover the mouse pointer over certain areas of the image);

4) animated infographics - dynamic (for example, columns on the chart can grow, one of the colors of the scheme can change or the drawn character acts in the infographic). This option differs from video infographics in that animated infographics do not contain video files. Animation is provided using NTML code or using images in a special format. Such images can create animations, but exist on the web page as objects;

5) video infographics - infographics using video, which is a relatively new phenomenon, but the popularity of such online schemes is growing rapidly, as they are easy to use and share on video sites such as YouTube and Vimeo. Such videos do not make much use of data visualizations (much of the information is presented in text), but they are very familiar to the target audience with the numbers in the right context;

6) interactive infographics - such samples of infographics, when working with which the viewer can to some extent control the research information or data visualization. Interactive infographics are also popular because they involve the viewer in working with data for a much longer period than static infographics.

As you can see, infographics are an integral part of online publications, so modern researchers distinguish types of online infographics: reference, visual explanation, persuasive, advertising and PR-infographics [6].
Reference infographics. Most of the infographics posted on online sources are for reference only. This is because Internet users are more interested in finding and sharing valuable information than in advertising.
Visual explanation. The main task of this type of infographic is to explain to the recipient the idea, process, relationship or complex concepts. Such visual explanations use illustrations, diagrams, icons (and sometimes individual data visualizations).

Persuasive infographics. Data visualizations and textual information in personalized infographics are aimed at achieving a specific effect: to bring the recipient to the desired conclusion, and then suggest the action he should take. Infographics of this type have a certain structure: key message; "What is the problem?"; danger; decision; "what can I do?". It is worth noting that the call to action contained in the personal infographics is not advertising.
Advertising infographics. It is considered a specific category of persuasive infographics. Like persuasive, advertising infographics directly stimulate the audience to take action. In this case, the call to action usually implies

that users are encouraged to purchase certain goods or services.

PR-infographics. Infographics used for PR purposes can be published as a supplement to a text press release. In other cases, the entire press release can be in the form of infographics.

The process of infographics is quite complex and responsible, because it requires skills in using graphic editors or special online programs. Also, the media specialist must have methods of analysis and collection of large amounts of data. As a rule, infographics should be based only on reliable information and facts, but there are cases of "falsification" and distortion of data by some journalists in order to create the desired effect and manipulation.

Infographics should present information not only conveniently and aesthetically appealing, but also so that it is better perceived by readers with different levels of awareness: from the usual addressee, who first reads the data, to a specialist in this problem. Therefore, for a better perception of visual content in information design recently began to use the principles of Gestalt psychology. With these rules, when creating infographics, designers have the opportunity to choose the most appropriate way to group objects to simplify the understanding of large amounts of data and reduce the time for their assimilation.

Creating quality infographics is not easy. What looks logical, beautiful and functional, most often formed by going through many options for presentation, requires basic knowledge of information, a high level of understanding of the subject. The developer of the infographic must get acquainted with the task, explore the data at the entrance, analyze them as necessary and possible, interpret and show clearly, accessible, vividly and logically.

V. Shevchenko identifies six main stages of work on a journalistic project: idea formation, data collection (content), design, emphasis, collection of additional information, search for visual images, establishing the type of data comparison, choosing the appropriate visualization method (practical implementation) [7, 9, 10] .
Both professional graphic editors and online infographic editors can be used to develop infographics.

Professional graphic editors have great functionality and allow you to create high-quality design infographics, perform detailed graphic representations, embody unique creative ideas. Such graphic editors allow you to use the full range of fine arts and techniques, but their use requires appropriate experience, time and material costs.

The industry standard for infographics is the professional vector editor Adobe Illustrator, which contains, in addition to a wide range of graphics and font tools, the tool Graph (Chart), with which you can create almost all major types of graphs, charts and time series.

Specialized online editors are often developed as amateur software products that make the process of creating infographics available to a wide audience. Viewing the templates offered by online services can help a beginner at the design stage.

Templates and user work presented on such sites can be used as analogues, examples of effective use of the language of visual images and the implementation of certain concepts. Let's look at some of today's popular services and analyze what infographic development tools they offer.

Easel.ly. One of the most famous services for creating infographics. The user gets a clean canvas and access to a large library of objects and the ability to upload their own images. In addition, there are 15 ready-made templates to choose from, you can apply any of them by simply dragging and dropping on the canvas.

Piktochart.com. Has the function of automatic infographic settings. You can also change the color scheme and fonts in the editor, use additional images, and use ready-made templates. There are 7 available templates in the free tariff, and when switching to a paid account, their number increases to 129 topics.

Visual.ly. A service whose main advantage is the ability to automatically generate infographics based on Google Analytics data and user accounts on social networks. In comparison with analogues it is more difficult. This is due to the availability of more professional tools and functions.

Fluxvfx. A service that allows you to create video infographics.

Stat Planet. With this tool you can develop interactive visualizations. The user is given access to the most important world data, which can be used in the format of diagrams, which are edited depending on the requirements and tasks of the infographic.

Google Public Data Explorer. Provides the ability to add the created infographics to the site. The advantage of the service is the use of open access data.

Conclusions

Thus, we see that each service has its strengths and weaknesses. They all have an ergonomic interface, tools for standardized infographics, an image library and a set of templates that contain ready-made stylistic and compositional solutions that meet the basic aesthetic and ergonomic principles. Moreover, the use of infographics created with the help of services is used not only by ordinary connoisseurs, but also by professional media people, and such infographics often appear on the pages of online publications. Therefore, the creation of infographics should be done by specialists, and the approach to each project should be individual.

Services are a powerful tool for popularizing infographics, which expands the possibilities of convergent editing and simplifies the activities of a media specialist. Services greatly simplify the process of creating infographics, but they are designed for beginners and non-professionals, and given the limited capabilities of a truly interesting infographic with their help is impossible. In terms of design, layout and layout, they can not compete with full-fledged graphic editors, such as Adobe Photoshop, Adobe Illustrator [8].

The benefits of online infographic editors include saving resources and time. They allow the user, who has basic PC skills, to create standardized infographics based on their own data. In addition, the use of online services develops visual thinking, allows you to get an idea of quality criteria and current trends in infographics, as well as to gain initial experience in the visual presentation of data.

Thus, the use of infographics is considered one of the priority areas of information presentation to the mass audience, is an important channel of social communication and corresponds to modern trends in the development of mass communication space.

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