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**GRAPHIC ORIENTED DESIGN OF A MODERN CITY**

**The purpose** is to analyse the objects of graphic design from the position of their aesthetic expressiveness and effectiveness of perception in the process of human orientation in the space of a modern city.

**Methodology.** The research methodology is based on the complex use of historical and comparative methods, system analysis, synthesis, generalization. The specifics of the study of the sign as an object of graphic design involves the use of semantic analysis methods.

**The result** reveal the historical aspects of the emergence and current trends in graphic communication signs and messages used to orient a person in the modern urban space. The communication messages of modern city inscriptions-names of objects, object-spatial and plane signs of orientation in the urban environment, road signs using graphic elements and fonts have been analyzed. The main features contributing to the effectiveness of the message and current trends of graphic means in solving the problems of orientation and communication in space are highlighted.

**Scientific novelty.** The ways of using graphic signs to solve the tasks of orientation and communication taking into account, modern trends in socio-cultural space have been analyzed and systematized. The methods for transforming the graphic form of the sign, its functional tasks in the process of human interaction with the urban environment are considered.

**Practical significance.** The analysis of graphic signs from the position of their application to solve navigation and, consequently, communication problems of the city, defines the specifics of further development of graphic design in the conditions of accelerated information and technological transformation of society, and actualizes the increasing number of visual ways to transmit information. The results of the study can be used as the information basis for the development of communication design objects in the space of the city.

**Keywords:** graphic design; sign; image; fonts; orientation; space of modern city.

**Introduction.** Graphic design tools used for orientation in the modern city perform the function of visual communication, expression of ideas, values through images, fonts, videos and more. In this case, the product of graphic design is the information that must be communicated to the person, while ensuring that it is not lost in the environment of "information noise" of urban space.

The task of graphic design is to highlight a particular message from the general flow, to pay attention to it. Taking into account the fact that the amount of information is constantly growing, the city dweller (especially relevant for megacities) has developed a mechanism of protection: filtering messages from the environment and dividing them into important and secondary.

Today, in graphic design objects (posters, videos, street signs, infographics)

accents have shifted, and the aesthetic component has given way to provocative trends that make the final product noticeable. The result is a mismatch between the general informational, architectural and stylistic paradigm of the city and the graphics of certain objects, as modern graphic designers are looking for ways to attract attention, evoke an emotional reaction to convey the necessary information, directing people in space.

**Analysis of previous research.** The meanings of signs as different components of receiving and transmitting information are reflected in the works of E. Tuemlow [17], B. Meggs & A. Purvis [8], D. Crow [2], A. Darley [3], S. Serova [15], M. Smikiklas [16], etc. The evolution of the graphic form of signs, their semantics in the design was covered by L. Butkevich, Y. Gerchuk, Y. Gordon, S. Khan-Magomedov, J. Jean, A. Miller, D. Foley, etc.

Thus, O. Goryacheva and I. Klymenko in their work analyze the design of visual communication regarding the infrastructure of the modern city, noting that it is "a system of structures of industries or facilities that provides life for the city and its inhabitants, including social, transport, financial, engineering, information, military, market, innovation industries" [11].

The problem of selecting the right information, which facilitates the search for the right directions of human movement in space continues to be relevant and is actively studied from different positions by designers and architects. Communities for problems of orientation in the city are organized. For example, the "Wayfinding" community, which has developed international standards for the graphic language of symbols and guidelines for its use [6].

The concept of urban orientation was further developed in the book by Canadian designers "Wayfinding": "People, Signs and Architecture" (first edition in 1992) [1], which consists of descriptions and illustrations of signs and symbols in the context of their practical use in traffic orientation in the complex conditions of the modern city. Navigational search in this book is considered in the form of strategies that people resort to find their way in a familiar or new environment, based on their perception, cognitive abilities, habits, as well as practical and commercial benefits that improve the results of such orientation, first of all it include architectural and graphic indicators. Such information is especially effective during emergencies, such as fires in public places.

So, art, cultural, sociological, narrowly specialized project research of the modern information environment contributed to the analysis of graphic expressive and aesthetic means.

**Statement of the problem.** The aim of the article is to analyze the communication objects of the modern city in terms of aesthetic expressiveness of graphic and font

elements and the impact on the effectiveness of the message.

**Results of the research.** The demand for the formation and development of infographics as a way of communication arose in the era of the industrial revolution, the significant growth of cities and the complexity of urban space in general. So, in the early twentieth century, the creation of a visual language of orientation in the urban environment moves from the field of art to the field of graphic design, because architects have come to the conclusion that graphic designers have all the tools to professionally, ergonomically modify space with professional techniques.

It should be emphasized that the first non-systemic single signs of orientation appear on the basis of poster advertising graphics and are not indicative, but decorative character. For example, the entrance to the Paris Metro, designed by architect E. Guimard in 1899 (Fig. 1). With the emergence of the Bauhaus - the most influential school of applied art, design and architecture of the XX century, the decoration of the space becomes more concise, acquiring a symbolic character. Examples of functional sign design of space, proposed by the Bauhaus school, can be seen on the examples of public buildings (Fig. 2, Fig. 3).

There is a gradual differentiation of navigation signs in the city into groups: orienteering signs in the public interior; orientation signs in transport systems; orientation signs in the urban environment in general.

An orientation system was formed, which can include signs, icons, carrying coded information and can eliminate the language barrier, charts, maps. All components used in complex, creating a holistic system of visual guidance of orientation in the urban environment [8]. From the second half of the twentieth century, the signs of orientation in the space of the city became an essential part of it.

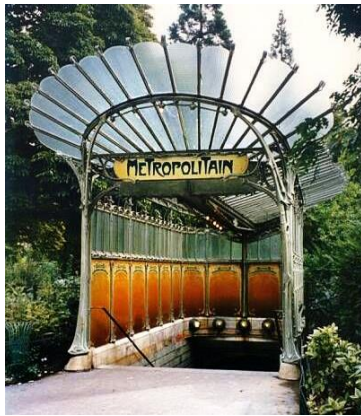


Fig. 1. Entrance to the Paris Metro with the inscription "Métropolitain", designed by architect E. Guimard (1899)

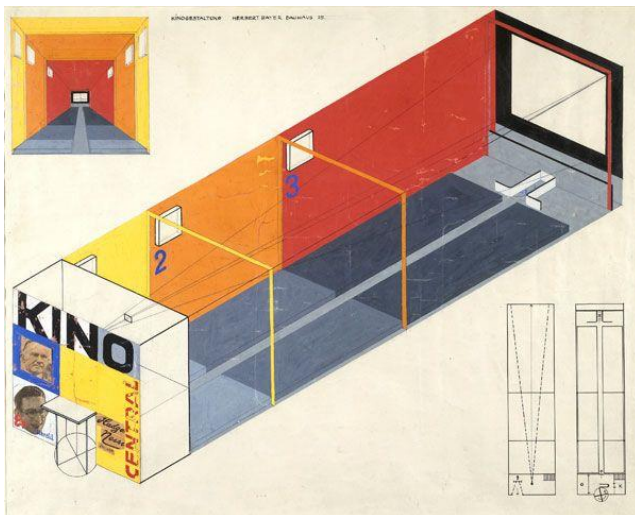


Fig. 2. G. Bayer. Design project of a cinema with the inscription "KINO". Bauhaus, 1924 [6]



Fig. 3. G. Bayer. Design project of a newspaper kiosk with the inscription "ZEITUNGEN". Bauhaus, 1924 [5]



Fig. 4. A entrance sign at Yanoda Rainforest Cultural Tourism Zone, Sanya Hainan, China [9]



Fig. 5. A prominent park sign at East Coast Park, Singapore [9]

The modern city, with its active massive complex construction, complex transport system, infrastructure, forms the need for a certain way of behavior and orientation of a person. The main task of such information orientation is to establish human communication with the surrounding space, using certain systems of signs and symbols and their solutions, which are used in graphics as a means of visual influences and designed to solve information problems in specific subject-spatial situations of modern society. Examples of orienteering signs in an urban environment are shown in Fig. 4, Fig. 5.

Signs of visual communication do not require verbal accompaniment, because the fundamentals of graphic images using "universal" icon. The character of the icons, the image they interpret, the size, the shape - depend on many factors, the main of which can be considered the scope of their application in the spatial environment of the city.

Such design of orientation signs, for example, transport systems, determines the factors of human speed, as well as the time of obtaining information. If the system of symbols is used in a unique object, non-standard images that work in the context of that location can be used as the graphic basis of the icon.

The internationality of modern globalized cities, with similar transport systems, the same shopping centers, popular and underdeveloped tourist routes, economic and political migration processes of the planet as a whole, highlights the problem of universal, international symbols that could be used in any orientation systems. In 1974, the AIGA Design Association and the US Department of Transportation developed 34 universal graphic signs for using at airports and other international transportation facilities.

The signs are based on icons that easily convey any information. For the presentation of "subject" objects is used the appearance of the object. Metaphorical and methodical

images are used for the transfer of actions. A combination of more specific icons is used for the representation of complex concepts in signs. Another 16 characters were added to this system in 1979. The signs of the AIGA system are publicly available on the official website of the associations. In some projects of transport navigation, the signs of the AIGA system are leading. Basis on them, the further projects of originals of the orientation signs on the stylistics are developed. This statement confirms the justification for the use of signs that are based on pictographic and ideographic writing. The system of road signs provides information in stages. Graphics of icons and ideograms of road signs differs in schematicity and conditionality.

Another officially documented system of graphic signs was the designed international organization of road navigation standards. It should be emphasized that the present road signs shows orientation group communication that can be viewed from the perspective of historiography, imaging features and typography. So, in view of the above, the prototypes of modern road signs were stone columns, as well as, for example, stone Polovtsian women (in Ukraine), that informed travelers about the distance to the next fortified post or other important place.

The nature and effectiveness of any system of orientation largely depend on the method of transmission of messages. Graphic messages of such system can be displayed in characteristic words in different languages and in different fonts. Similarly, in order to improve the orientation used images that can be detailed, for example, photographs or illustrations or simple, such as color designations or symbols. Symbols can bring a simplicity, clarity and individuality to the orientation system.

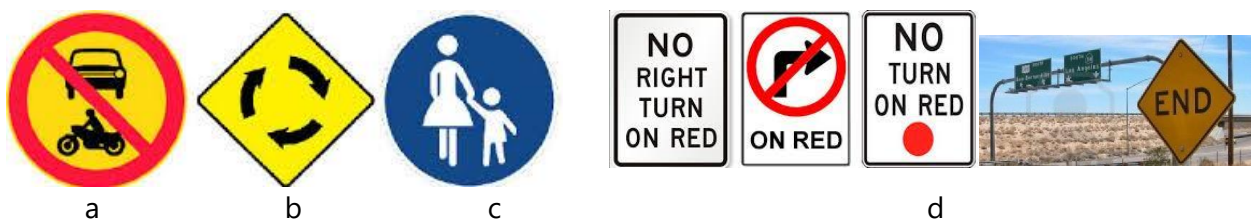
Some designers take the position, which is that there should be a hierarchy of characters based on a hierarchy of areas in a particular environment. The main areas provided unique characters seen, less

important areas less accentuated. This position supports the use of numbers, letters and colors to highlight any specific features or particularly significant information. The essence of this position is that some symbols have already acquired the status of a design language and can be used quite formally with the text, and other characters still need to be emphasized in the development for further use. Proponents of this position use the principle of redundancy of information to clearly state at any time, varying the size of the symbols on different signs to achieve different effects. This approach is used at airports, where information about arrival and departure is often presented as large symbols, while cafes or outlets are satisfied with more modest symbols. Important information should be visually noticeable, which requires increasing size and its special emphasis.

The need to use road signs is due to the adoption of an act on the mandatory placement of pillars indicating the directions and distances in 1773. With the proliferation of cyclists in the 19th century, danger boards were placed on the roads to warn of sharp turns and slopes. The first standard road signs were adopted in France, in 1903.

Recommendations about the graphic format of the symbols appeared in 1904, in which the image should be placed. Following these recommendations the image should include: for warning signs – a red triangle; for speed limit signs – a white circle with a red border; for prohibition signs – a circle with a solid red background. In 1909, these recommendations became international. In addition to the fixed form of road signs, color identification is also established: red – danger, blue – warnings or instructions.

It should be noted that with time form graphic road sign has not changed, but the number of characters increased significantly, due to the active development of transport systems. Contrasting color combinations are used when displaying icons, for example, on a blue background – a white image, on a yellow – black or red, etc. In the line graphics of the icons there is the regularity: the line is dense, often single, if there are several lines, they are contrasting in width. The sign is filled by designing images according to the methods of pictographic writing: real, abstract-symbolic (arrows, vehicles, stylized figures of people, etc.) (Fig. 6).



**Fig. 6.** Road signs: a – Motor vehicle traffic ban, Finland; b – Roundabout, Ireland; c – Pedestrian zone, Germany. Icons are depicted using dot, silhouette and linear graphics in certain color combinations [13]; d – Signs with using fonts, USA [10]

Graphic characteristics of road signs of Ukraine were developed by the Research Center for Road Safety of the Ministry of Internal Affairs of Ukraine. GOST 2586-94 fully complies with the requirements of the Convention on Road Signs and Signals (Vienna, 1968) and the European Agreements that supplementing this Convention (Geneva,

1971), which states the geometric shape and pictographic content of the sign, defines color identification and parameters of the used shades of colors. In addition, the size and scale of the signs associated with the conditions of perception of information in the process of driving a vehicle are determined [12].

In some countries, as mentioned above, such as the United States [12], road signs are characterized by using texts with a special font (Fig. 6, d).

Summing up, we emphasize that in the culture of the information society the printed word loses its dominant position, and the formalization of linear communication, with its logical system of constructing an information message has been replaced by infographic hypertext [17, p.55]. Under the "hypertext" in this case, we understand the principle of organization the information arrays, in which the individual elements are connected more often associatively than thematically.

**Conclusions.** Having analyzed the graphic means of communication in the space of the modern city, we note the main features that contribute to the effectiveness of the message: road signs must be read quickly and efficiently; language barriers, cultural differences, as well as peculiarities of context perception significantly complicate this task; using the universal elements of pictography in the creation of road graphics helps to overcome intercultural problems and establish

universal communication; graphic design of the sign is an associative connection, which in the modern city becomes a model, the rule of formation some specific messages, which due to the generally accepted nature of the sign or symbol have the ability to navigate in the environment.

Current trends in graphics solving problems of orientation and communication in space are:

- the use of detailed text messages (objects of orientation in local areas of the city),
- the use of image-generalized messages (color symbols or symbols, stylized images);
- designing images by pictographic writing methods (real, abstract-symbolic);
- the use of graphics in contrasting color combinations.

Graphics of signs, symbols and values-messages surround a person everywhere, but at the same time organically fit into the urban environment, being, first of all, the most important segment, which models the information and emotional flows of the modern city.

### Література

1. Arthur P., Passini R. Wayfinding: People, Signs, and Architecture. Focus Strategic Communications, 2002. 238 p.
2. Crow D. Left to Right: The Cultural Shift from Words to Pictures. Lausanne: AVA Publishing SA, 2006. 193 p.
3. Darley A. Visual Digital Culture. Surface Play and Spectacle in New Media Genres. N. Y.: Routledge, 2000. 225 p.
4. Design Principles for Wayfinding. URL: <http://www.ai.mit.edu/projects/infoarch/publication/s/mfoltz-thesis/node8.html>.
5. From Bauhaus to beinhaus. URL: <https://thechannelhouse.org/2013/11/09/bauhaus-color/herbert-bayer-design-for-a-newspaper-stand-1924-tempera-and-cut-and-pasted-print-elements-on-paper-64-5-x-34-5cm/>
6. Herbert Bayer. URL: <http://www.designishistory.com/1920/herbert-bayer/>
7. Hubregtse M., Wayfinding, Consumption, and Air Terminal Design. London: Routledge, 2020. 215 p.
8. Meggs B. P., Purvis A. W. Meggs' History of Graphic Design. 6th ed. New Jersey. 2016. 315 p.
9. Svana Eyþórsdóttir K. Street and Wayfinding Signs. URL: <https://www.smashingmagazine.com/street-and-wayfinding-signs-part-3/> (дата звернення 19.12.2020).
10. Yanhua Lu. Creating a Successful Wayfinding System: Lessons Learned from Springfield, Massachusetts. 2018.
11. Горячева Е., Клименко И. Дизайн визуальной навигации в инфраструктуре современного города как фактор социализации личности. URL: <https://www.jour.fnisc.ru/index.php/hsr/article/view/6113/5970> (дата звернення 21.12.2020).
12. Дорожные знаки США. URL: [http://bananet.ru/dorognie\\_znaki\\_v\\_usa](http://bananet.ru/dorognie_znaki_v_usa). (дата звернення 21.12.2020).

13. Знаки дорожні. Загальні технічні умови. Правила застосування ДСТУ 4100 - 002. URL: [http://pdd.ua/r/5/f/doc/DSTU\\_4100\\_2002.pdf](http://pdd.ua/r/5/f/doc/DSTU_4100_2002.pdf) (дата звернення 20.12.2020).

14. Предписывающие знаки. URL: <https://vodiy.ua/ru/znaky/4/> (дата звернення 20.12.2020).

15. Серов С. И. Графика современного. М.: "Линия График", 2005. 408 с.

16. Смикиклас М. Инфографика. Коммуникация и влияние при помощи изображений. СПб.: Питер, 2014. 152 с.

17. Туэмлоу Э. Графический дизайн: фирменный стиль, новейшие технологии и креативные идеи. М.: Астрель, АСТ, 2006. 256 с.

### Reference

1. Arthur, P., Passini, R. (2002) Wayfinding: People, Signs, and Architecture. Focus Strategic Communications, 238 p. [in English].

2. Crow, D. (2006) Left to Right: The Cultural Shift from Words to Pictures. Lausanne. AVA Publishing SA. 193 p. [in English].

3. Darley, A. (2000) Visual Digital Culture. Surface Play and Spectacle in New Media Genres. N.Y.: Routledge. 225 p. [in English].

4. Design Principles for Wayfinding. URL: <http://www.ai.mit.edu/projects/infoarch/publications/mfol-tz-thesis/node8.html> [in English].

5. From Bauhaus to beinhaus. URL: <https://thecharnelhouse.org/2013/11/09/bauhaus-color/herbert-bayer-design-for-a-newspaper-stand-1924-tempera-and-cut-and-pasted-print-elements-on-paper-64-5-x-34-5cm/> [in English].

6. Herbert Bayer. URL: <http://www.designhistory.com/1920/herbert-bayer/>

7. Hubregtse, M. (2020) Wayfinding, Consumption, and Air Terminal Design. London: Routledge, 215 p. [in English].

8. Meggs, B. P., Purvis, A. W. (2016) Meggs' History of Graphic Design New Jersey. 315 p. [in English].

9. Svana Eypórsdóttir K. Street and Wayfinding Signs. URL: <https://www.smashingmagazine.com/street-and-wayfinding-signs-part-3/> (Last accessed: 19.12.2020) [in English].

10. Yanhua, Lu. (2016) Creating a Successful Wayfinding System: Lessons Learned from Springfield, Massachusetts [in English].

11. Horiachieva, E., Klymenko, Y. (2018) Dizain vizualnoi navyhatsyy v ynfrastrukture sovremennoho horoda kak faktor sotsyalyzatsyy lychnosty [Visual navigation design in the infrastructure of the modern city as a factor of personal socialisation]. URL: <file:///C:/Users/Admin/Downloads/dizayn-vizualnoy-navigatsii-v-Infrastrukture-sovremennogo-goroda-kak-faktor-sotsializatsii-lichnosti.pdf> (Last accessed: 21.12.2020) [in Russian].

12. Dorozhnyie znaki SShA [US road signs]. URL: [http://bananet.ru/dorognie\\_znaki\\_v\\_usa](http://bananet.ru/dorognie_znaki_v_usa) (Last accessed: 21.12.2020) [in Russian].

13. Znaky dorozhni. Zahalni tekhnichni umovy. Pravyla zastosuvannia [Road/signs. General technical conditions. Rules of application]. URL: [http://pdd.ua/r/5/f/doc/DSTU\\_4100\\_2002.pdf](http://pdd.ua/r/5/f/doc/DSTU_4100_2002.pdf) (Last accessed: 20.12.2020) [in Ukrainian].

14. Predpisyvayushchie znaki [Mandatory signs]. URL: <https://vodiy.ua/ru/znaky/4/> (Last accessed: 20.12.2020) [in Russian].

15. Serov, S. Y. (2005) Hrafyka sovremennoho znaka [Graphics of a modern sign]. Moskva [in Russian].

16. Smykyklas, M. (2014) Ynfografiyka. Kommunykatyia y vlyanye pry pomoshchy yzobrazhenyi [Infographics. Communication and influence by means of images]. S. Petersburg [in Russian].

17. Tuehmlou, E. H. (2006) Graficheskij dizajn: firmennyj stil', novejshe tekhnologii i kreativnye idei [Graphic design: corporate identity, latest technologies and creative ideas]. Moskva [in Russian].

### ГРАФІЧНИЙ ОРІЕНТАЦІЙНИЙ ДИЗАЙН СУЧАСНОГО МІСТА

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**Мета:** аналіз об'єктів графічного дизайну щодо естетичної виразності та ефективності сприйняття для

### ГРАФИЧЕСКИЙ ОРИЕНТАЦИОННЫЙ ДИЗАЙН СОВРЕМЕННОГО ГОРОДА

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**Цель:** Анализ объектов графического дизайна относительно их эстетической выразительности и эффективности восприятия в процессе

орієнтування людини в просторі сучасного міста.

**Методологія.** В основі методології дослідження лежить комплексне використання історичних і порівняльних методів, системного аналізу, синтезу, узагальнення. Специфіка дослідження знаку як об'єкту графічного дизайну передбачає застосування методів семантичного аналізу.

**Результати.** Розкрито історичні аспекти виникнення та сучасні тенденції графічних комунікаційних знаків і повідомлень, що застосовуються для орієнтування людини в сучасному урбаністичному просторі. Проаналізовано комунікаційні повідомлення сучасного міста: написи-назви об'єктів, предметно-просторові і площинні знаки орієнтування у міському середовищі, дорожні знаки з використанням зображувальних елементів і шрифтів. Виділено основні особливості, що сприяють ефективності повідомлення, та сучасні тенденції графічних засобів у вирішенні завдань орієнтації і комунікації у просторі.

**Наукова новизна.** Проаналізовано й систематизовано способи вживання знаків графічного дизайну для вирішення завдань орієнтації і комунікації із врахуванням сучасних тенденцій соціокультурного простору. Розглянуто способи трансформації графічної форми знака, його функціональні завдання в процесі взаємодії людини з міським середовищем.

**Практична значущість.** Аналіз графічних знаків з позиції їх застосування для вирішення навігації та, відповідно, комунікаційних проблем міста, визначає специфіку подальшого розвитку графічного дизайну в умовах прискорення інформаційно-технічних перетворень суспільства, яке актуалізує все більшу кількість візуальних способів передавання інформації. Результати дослідження можуть використовуватися у

орієнтування людини в просторі сучасного міста.

**Методологія.** В основі методології дослідження лежить комплексне використання історичних і порівняльних методів, системного аналізу, синтезу, узагальнення. Специфіка дослідження знаку як об'єкту графічного дизайну передбачає застосування методів семантичного аналізу.

**Результати.** Раскрыты исторические аспекты возникновения и современные тенденции графических коммуникационных знаков и сообщений, применяемые для ориентирования человека в современном урбанистическом пространстве. Проанализированы коммуникационные сообщения современного города надписи-названия объектов, предметно-пространственные и плоскостные знаки ориентирования в городской среде, дорожные знаки с использованием изобразительных элементов и шрифтов. Выделены основные особенности, способствующие эффективности сообщения и современные тенденции графических средств в решении задач ориентации и коммуникации в пространстве.

**Научная новизна.** Исследованы и систематизированы способы употребления знаков графического дизайна для решения задач ориентации и коммуникации с учетом современных тенденций социокультурного пространства. Рассмотрены способы трансформации графической формы знака, его функциональные задачи в процессе взаимодействия человека с городской средой.

**Практическое значение.** Анализ графических знаков с позиции их применения для решения навигации и, соответственно, коммуникационных проблем города, определяет специфику дальнейшего развития графического дизайна в условиях ускорения информационно-технических преобразований общества, актуализирует все большее количество визуальных способов передачи информации. Результаты исследования могут использоваться в качестве информационной



якості інформаційної бази для розробки об'єктів комунікаційного дизайну у просторі міста.

**Ключові слова:** графічний дизайн; знак; зображення; шрифти; орієнтація; простір сучасного міста.

базы для разработки объектов коммуникационного дизайна в пространстве города.

**Ключевые слова:** графический дизайн; знак; изображение; шрифты; ориентация; пространство современного города.

ІНФОРМАЦІЯ  
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