GEOGRAPHIC DATA MODEL MAP

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Introductions. A map as a model - a representation of reality is a model of spatial phenomena and the most successful graphic tool for transmitting spatial information. Maps are divided into general geographic (general reference) and thematic (thematic).

Aim. According to tradiative approach to maps (message paradigm) – the map is the final product that communicates spatial distribution through the use of symbols, classification, etc. At the same time, the user does not have access to the original unclassified information and cannot regroup the data when circumstances or needs change.

An alternative approach involves saving the initial attribute data with their display according to the user's needs according to his specifications. The use of information technologies allows the user to obtain several classifications of data with appropriate visualization and convenient interpretation. The main function of cartographic representations is analysis, and not just viewing of spatial distributions.

Materials and methods. A map is a simplification of reality, and the main purpose of a thematic map is to provide important data without unnecessary and redundant details with a degree of simplification determined by the level of detail required. The scale that indicates the degree of reduction on the map can be verbal (expressed in words), numerical (the distance on the map and the distance on the ground are given in the same units as a fraction) and linear (the distance on the ground is displayed directly on the map).

Maps reflect the position of objects in space and their shape, as well as their qualitative and quantitative characteristics. Interrelated geometric objects and attributes are necessary for a cartographic document. Symbols for displaying real

objects are not a miniature copy of them, but only a symbolic designation. The map legend is the key to understanding the symbolic markings on the map and combines geometric objects with attributes

Cartographic projection is a set of methods designed to display with acceptable accuracy the spherical Earth on a flat medium. Families of projections are divided into nlinear, cylindrical, conical and azimuthal.

The process of transferring a spherical surface to a flat medium is performed using methods of geometry and trigonometry, which reproduce the physical process of light passing through a globe.

Results and discussion. A map is a model of representing reality, a model of spatial phenomena and the most successful graphic tool for presenting spatial information.

Conclusions. Tradition approach the return to maps or message paradigm views the map as an end product with spatial distribution through the use of symbols, classifications, etc., without providing the user with initial, unclassified information and the ability to regroup the data as circumstances or needs change. An alternative approach allows you to save the initial attribute data with their display according to the user's needs according to his specifications. Cartographic projection is a set of methods designed to display with acceptable accuracy the spherical Earth on a flat medium, and the process of transferring a spherical surface to a flat medium is performed using methods of geometry and trigonometry, which reproduce the physical process of light passing through a transparent globe.

LITERATURE

1. Геоинформатика: Учеб. для студ. вузов / Е. Г. Капралов, А. В. Кошкарев, В. С. Тикунов и др.; под ред. В. С. Тикунова. – М.: Издательский дом «Академия», 2005. – 480 с.

2. Pasichnyk O. Basics of programming for geoinformation systems // Topical issues of modern science, society and education. Proceedings of the 8th International scientific and practical conference. SPC “Sci-conf.com.ua”. Kharkiv, Ukraine. 2022.

Pp. 226-229.

3. Технології комп’ютерного проектування : конспект лекцій для здобувачів вищої освіти (ОР «бакалавр») спеціальності 122 «Комп’ютерні науки» / О. А. Пасічник, Р. В. Сорокатий, , Т. К. Скрипник, Е. А. Манзюк. Хмельницький: ХНУ, 2021. – 136 с.

4. Основи об‘єктно-орієнтованого програмування: навч. посіб. для студ. ВНЗ / Сорокатий Р. В., Пасічник О. А., Скрипник Т. К. – Хмельницький: ХНУ, 2019. – 175 с.

5. ДеМерс Майкл Н. Географические информационные системы. Основы.: Пер. с англ. – М.: Дата+, 1999. – 489 с.

6. Скворцов А. В. Геоинформатика: Учебное пособие. – Томск: Изд-во Том. ун-та, 2006. – 336 с.

7. Вестра Э. Разработка геоприложений на языке Python / пер. с англ. А. В. Логунова. - М: ДМК Пресс, 2017. - 446 с.: ил.

8. Поморцева Е. Е. Программирование геоинформационных задач: учеб. пособие / Е. Е. Поморцева; Харьков. нац. ун-т гор. хоз-ва им. А. Н. Бекетова. Харьков: ХНУГХ им. А. Н. Бекетова, 2017. – 121 с.

9. Бескид П. П., Куракина Н. И., Орлова Н. В. Геоинформационные системы и технологии. - СПб.: изд. РГГМ У, 2010. - 173 с.

10. Блиновская Я. Ю., Задоя Д. С. Введение в геоинформационные системы. – М.: Форум, 2016. – 112 с.

11. Бугаевский Л. М., Цветков В. Я. Геоинформационные системы: Учебное пособие. – М.: 2000. – 222 с.

12. Лайкин В. И., Упоров Г. А. Геоинформатика: учебное пособие / Лайкин В. И., Упоров Г. А. – Комсомольск-на-Амуре: Изд-во АмГПГУ, 2010. 162 с.

13. Лурье И. К., Самсонов Т. Е. Основы геоинформатики // Информатика с основами геоинформатики. Часть 2: Основы геоинформатики. Учебное пособие. – М.: Географический факультет МГУ, 2016. – 200 с.

14. Pasichnyk O. Design of geographic information systems // Modern research

in world science. Proceedings of the 2nd International scientific and practical conference. SPC “Sci-conf.com.ua”. Lviv, Ukraine. 2022. Pp. 363-368.

15. Pasichnyk O. Spatial data models // Innovations and prospects of world science. Proceedings of the 10th International scientific and practical conference. Perfect Publishing. Vancouver, Canada. 2022. Pp.347-351.