



COPY RIGHT



2023 IJIEMR. Personal use of this material is permitted. Permission from IJIEMR must be obtained for all other uses, in any current or future media, including reprinting/republishing this material for advertising or promotional purposes, creating new collective works, for resale or redistribution to servers or lists, or reuse of any copyrighted component of this work in other works. No Reprint should be done to this paper, all copy right is authenticated to Paper Authors

IJIEMR Transactions, online available on 16th May 2023.

Link: <https://ijiemr.org/downloads/Volume-12/Issue-05>

10.48047/IJIEMR/V12/ISSUE05/09

Title: **CHECKS TO DETERMINE THE CONTENT OF DIGITAL CADASTRAL MAPS AND PLANS**

Volume 12, Issue 05, Pages 77-80

Paper Authors:

Khusanova Mashkhura Islamovna, Isakov Muyassar Kamilovich, Xushvaqto Ravshanbek Abdualim o'g'li, Omonov Ismoil Xolboyevich, Matlabov Doston Akbar o'g'li, Qalandarov Muxriddin Maqsiddin o'g'li



USE THIS BARCODE TO ACCESS YOUR ONLINE PAPER

To Secure Your Paper As Per **UGC Guidelines** We Are Providing A Electronic Bar Code

CHECKS TO DETERMINE THE CONTENT OF DIGITAL CADASTRAL MAPS AND PLANS

Khusanova Mashkhura Islamovna¹, Isakov Muyassar Kamilovich², Xushvaqto Ravshanbek Abdualim o'g'li³, Omonov Ismoil Xolboyevich⁴, Matlabov Doston Akbar o'g'li⁵, Qalandarov Muxriddin Maqsiddin o'g'li⁶

Teachers of "Geodesy and cartography" chair of Samarkand state architectural and civil engineering institute^{1,2,3,4,5,6}

Abstract: Information technologies have developed in all areas, including residential areas, agricultural enterprises, to such an extent that the improvement of cadastral work in them has become a demand of the times. It is important to create and work with digital maps. The purpose of this work is to develop digital maps used in the registration of residential areas and buildings and structures, similar to the digital maps used in agriculture.

Keywords: Digital land cadastral maps, a vector model that provides metric and symmetrical explanations of objects.

Introduction

The content of digital cadastral maps and plans is one of the most important requirements. Among the documents explaining their content, there should be lists of classifiers of objects of cadastral cartography, codes of classification symbols of objects grouped in its structure, descriptions and classifications of conditions.

Such a document not only defines the content of the map, but can be directly used to describe the objects on the digital cadastral maps. Also, the concept of determining the content of cadastral maps can be formed. It is possible that the land cadastre should be oriented towards solving its specific task, that is, a large part describes the land cadastral specifications and provides the necessary minimum level of the topographic basis, serves to orient the location of the cadastral objects in relation to the objects on the site.

Land cadastral maps can be objects of special content:

- land parcels and their boundaries divided by different forms of land use, i.e. the boundaries of territories with undefined legal status (for example, illegal user, no farm);
- boundaries of the cadastral zoning unit (cadastral quarters, arrays, zones);
- boundaries of administrative-territorial divisions;
- boundaries of functional zones (water storage, sanitary protection, nature protection, etc.).

From the group of listed objects, the last one is distinguished by data collection and certain difficulties. Therefore, the content of land cadastral maps, this part of which may not be provided directly as a result of the delivery of cadastral images, is constantly formed by filling the contents of cadastral maps.

Digital land cadastral maps should have the following topographic bases and objects:

- boundary (mejevnyx) types, geodetic points;
- residential construction objects (buildings, structures, streets, squares);
- industrial objects (buildings, structures, pipelines, electricity transmission and communication networks);
- separate objects of relief;
- generalized objects of plants.

In relation to all objects of the topographic basis, it should be noted that their presentation is generalized, they are divided into views without separate signs (for example, all forest plants, such as the "forest" object, plants without dividing into type, transmission, uniqueness, etc.), that is, it is divided into 20-30 objects independent of reality. Therefore, for 1:1000 and 1:2000 scale plans, the surveying is done only within the boundaries of the settlement; the 1:1000 scale map does not depict the objects within the boundaries of the settlement.

Perhaps, such restrictions of the representatives of the topographic base objects may conflict with the demands of the local administration, who want to have complete maps. This contradiction can be solved by creating an additional classifier (completely describing the topographic basis objects) which is connected with the classifier of cadastral cartography objects and has a strictly limited content.

Digital land cadastral maps should be presented in vector format. The concrete format of transmission of digital land cadastral maps (substitute format) must also comply with the regulations of regulatory and technical documents. The lack of such a regulation leads to the expansion of work on the creation of digital land cadastral maps, the user in the creation of the map and the user in the coming from them, the data interface between different information systems. This problem is often not evaluated and the digital cadastral map is given a brief interpretation.

For example; as a vector graphics file.

The main requirements for the format in the presentation of digital cadastral maps can be conveyed as follows.

- the format should contain a vector model that explains the objects and provides the appearance of the place (their graphic representation), the transfer of the passport of numbered cadastral maps, the metric and symmetrical explanations of the objects;

- the passport of digital cadastral maps must contain the content of its necessary general classifications (nomenclature or information about the names of the executors, scale, methods of drawing up maps, the used coordinate system, elevation and graphing, general classifications of accuracy, etc.) need

Aspects of graphic representation of objects in place on the map (screen) using conditional symbols should not be considered as subjects of format content:

- the format should not depend on the method of creating digital cadastral maps and the technology and product programs used for this;

- the format should provide the same chain node structure when presenting the metric of objects, as well as be able to draw the metric of objects and models presented in a row;

- the object semantics drawing structure should be independent of the content of the classifier, separate the object from the general plurality of classified objects and any amount of classification into plural pairs; the code of classifications should be able to convey information about the importance of classifications;

- should be able to provide classifications of metric accuracy of any individual object;

-The format should be filled lightly with simple, new type entries, for example; describing spatial-logical relationships of objects. The comments on spatial data representation can be applied to one possible point representing land cadastral data. It is possible that many of the reviewed requirements should be reworked. In this case, it is necessary to review the regulations of regulatory and technical documents that ensure reliable work on the creation of land cadastral data bases.

For experimental confirmation, an analysis of samples of current cadastral maps and plans created in each country is carried out.

Literature:

1. Mirzaliyev T. Cartography.-Tashkent., University, 2006.
2. Mirzaliyev T., Karaboyev J. Designing and making cards.-Tashkent., "Talqin", 2007.
3. Mirzaliyev T., Musayev IM, Safarov Ye. Yu. Socio-economic cartography.-Tashkent.: New generation, 2009.
4. Ye. Safarov, Musayev I., Abdurakhimov N. Geoinformation system and technologies. T.: TIMI, 2008., 160 p.
5. Safarov Ye.Yu. Geographic information systems.-Tashkent., University, 2010.

[mailto: site@tikhvin. org](mailto:site@tikhvin.org)

www.gov.uz/Yergeodezkadastr- State Committee of Land Resources, Geodesy, Cartography and State Cadastre of the Republic of Uzbekistan