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# Modeling To Spatial Organization of the City

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**ABSTRACT:** The article analyzes the progress and prospects of urban development. Planning solution of many storey residential buildings and residential areas. The substantiation of the formation of residential areas and neighborhoods.

"Spatial organization of the city", being a serious contribution to the theory of urban planning will be very useful for not only workers engaged in planning, construction and improvement of cities of students of the corresponding profile.

**KEYWORDS:** spatial expansion, improving the comfort of the urban environment, the gradosphere, the dynamics of development, modular structures, the process of discrete transition, adequate quarter.

## I. INTRODUCTION

Scientific and technical development, activating urban planning processes, sharply raised the question of the modern operational model of the developing city. Its application would make it possible to use the technical and economic method of optimal programming of the urban environment at all stages of the origin, development and existence of the city, from its construction to the operation of the urban economy.

The construction of such a model of the modern city was written by many architects and urban planners. They said that the city as an organism in continuous development, dialectically approaches the analysis of contradictory problems: the territorial expansion of the city - the expansion of its space, on the one hand, and the need for improvement, preservation and improvement of the comfort of the urban environment - on the other.

In the spatial expansion of cities, many architects see the danger of disturbing the ecological balance in the environment "gradosphere". Many wrote "the dynamics of any settlement carries a known threat to the natural environment."

## II. RELATED WORK

Development and application of modular structures in urban planning it is concluded that the modular grid of streets in the form of blocks of square or rectangular shape was one of the most common methods of forming the planning structure of the city. The reason for this was the simplicity and clarity of the plan, flexibility in relation to communication links and, the homogeneity of the forming elements, adaptability to various conditions, the relative autonomy of the constituent elements of cells and the ability to build a plan without a breach of planning structure of the city.

And although at the present stage of development of the planning structure of the city block system with its frequent street grid came into conflict with the functioning of transport and the organization of a full-fledged cultural-consumer services of the population, vitality of the quarter as the territorial module appeared in a new capacity - the neighborhood the building. It is characteristic that the "group of houses" with a population of 1.5 thousand to 3.5 thousand inhabitants and a territory of 4 to 8 hectares. it formed a primary residential complex, a cell adequate to the quarter, which served as the initial modular basis for the formation of residential areas and neighborhoods.

The quarter in new conditions was released from strict forms of a square or a rectangle and having opened according to laws of a free plan, transferred the functions at first to the residential district, and then to the residential district formed on new step system of cultural and consumer services.



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## III. TEXT INPAINTING

"Residential group" was the form of optimal planning solutions of residential areas and neighborhoods, which is fixed for the future as a planning module of the residential area with two and three-stage service system. Along the way, we note that under the two-stage system of formation of residential areas, we mean the organization of their residential groups, which, bypassing the neighborhoods, are directly provided with objects of periodic maintenance.

The main requirement for a mobile master plan for the development of the city. It is to ensure the unity of the solution of two problems: the dynamic development of the city; improvement and preservation of the natural environment. Both are presented as a process of discrete transition to new qualities of the environment in flexible forms and, perhaps, with previously unforeseen changes. In this regard, moving from the "planar" two-dimensional to three-dimensional space, the two main components of the planning structure of the city are considered: communication links and functional-spatial elements of the city, tied to communications and built, like them, according to their system of urban planning modules (GM). As a result, a coherent system of modular hierarchy is formed in the urban planning process, when the modules of the communication network in conjunction with the module of the territorial unit consistently and discretely form the space of the city.

## IV. EXPERIMENTAL RESULTS

It is the planning module of the territory as the primary element of the open space with a complex organized living environment and as an element of the development of the master plan that becomes the basis for the formation, development and improvement of the urban environment.

The application of the module in the design of industrial and scientific complexes, refers to the residential group as a succession of blocks, a universal form of modeling of the living environment in its modern complex understanding.

## V. CONCLUSION

So, a planning module primary cell "residential area" that performs both the role of design object element functionally organized living environment, of the construction and of the element of "increment" in the process of growth and development of residential complexes, appear to be a universal key to the formation of the planning structure and space of residential areas and microbio-new. In this case, the urban environment is formed by increasing the territorial modules of the city-residential areas or neighborhoods - and providing them with backbone communication links.

The industrial and scientific complexes formed territorially on the modular system participate in the General scheme of city construction on a par with residential areas and residential territories.

This is the dynamic operational model of the big city and the approach to its implementation, to solving the problem of urban development management. "Dynamic", because this model, although "alternately" or "poelementno", can develop, increasing; "operational", because at any stage of its operation, you can make adjustments and additions, without disturbing the overall structure of the city, by repeating in a new quality previously used modular elements.

Spatial organization of the city, being a serious contribution to the theory of urban planning, will be very useful for workers involved in planning, construction and improvement of cities and students of the relevant profile.

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