

new branches. For example, frescoes, mosaics, and later stained glass appeared, when the role of light in the medieval period in the structure of the temple was the most important.

In modern monumental painting new materials and directions are actively mastered. Murals, graffiti, street art, as well as advertising on banners and any other surfaces in the city structure, have firmly entered the life of a modern person, becoming a kind of decor against the background of architectural structures striving for minimalism and simplicity of forms. Modern architectural objects have gradually lost sculptures, stucco and other plastic elements.

Today, the attitude towards murals and graffiti on the "city's body" is ambiguous, comparable perhaps to the attitude towards tattoos on the human body. It should be noted that for European culture, tattoos were used mainly for branding cattle or marking criminals (outcasts of society), unlike the cultures of southern and western people, where, in this way, belonging to a tribe or clan was designated, as well as a person's place in it.

Graffiti and murals as a new urban anthropological layer have become rich material for sociological and ethnographic research. Experts believe that graffiti is not so much an exchange of symbolic signs within subcultural communities, but a product of globalized culture, an expression of the desire to join the mainstream. Graffiti and muralism have been successfully commercialized and are often used as one of the tools of creative development – to attract tourists, activate squares, neighborhoods and entire districts.

IMPROVING THE DECODING EFFICIENCY OF LUBY TRANSFORMATION CODES BASED ON OPTIMIZED GRAPH REPRESENTATION

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The continuous development of digital technologies necessitates ensuring efficient information exchange between elements of telecommunication systems and networks. Information encoding methods play an important role in these operations. Therefore, it is advisable to use error-correcting codes designed to ensure the reliable transmission and storage of information. A modern example of such coding is Luby Transform (LT) codes [1].

LT codes are based on a graph model, where encoded symbols are formed by combining source symbols, and each encoded symbol is connected to a random number of source symbols (according to the Soliton distribution). The decoding process starts with symbols of degree 1 (i.e., those connected to only one source symbol) and proceeds through the gradual elimination of known values, similar to solving a system of linear equations. The efficiency of this process depends on the

structure of the connection graph that is making the problem of efficient decoding highly relevant [2, 3].

Existing LT code decoding methods were analyzed, and key issues related to graph representation were identified. Based on this analysis, optimization methods for the graph structure were proposed, which are crucial for improving decoding efficiency. Additionally, a visualization of the optimized graph was presented and analyzed. The results of this research demonstrate that optimized graph representation enables LT codes to function faster, more reliably and more efficiently.

As a conclusion, the application of the proposed methods will enhance the decoding algorithm's efficiency, allowing for the quick and reliable recovery of lost packets — an especially important factor for lossy communication channels and wireless network environments.

References:

1. Ryan W., Lin. S. Channel Codes: Classical and Modern – New York: Cambridge University Press, 2009. – 674 p.
2. Luby M. LT codes. Proceedings of the 43rd Symposium on Foundations of Computer Science, IEEE Computer Society, 2002. – pp. 271 – 280
3. Blasco F. L., Liva G., Bauch G. LT Code Design for Inactivation Decoding. Institute of Communications and Navigation DLR (German Aerospace Center), Wessling, Germany 82234. Institute for Telecommunication Hamburg University of Technology, Hamburg, Germany.

THEORETICAL AND METHODOLOGICAL FRAMEWORK FOR THE RENOVATION OF INDUSTRIAL ZONES IN THE CONTEXT OF POST-WAR DEVELOPMENT

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In the context of Ukraine's post-war reconstruction, the renovation of industrial zones plays a vital role in spatial development, economic reintegration, and the creation of a sustainable urban environment. Modern challenges require a reconsideration of approaches to the use of post-industrial areas with regard to ecological safety, economic efficiency, and social inclusivity.

The *aim* of this study is to define the theoretical and methodological foundations of industrial zone renovation under post-war conditions, based on international experience and the specific needs of Ukraine.

Industrial zone renovation refers to a comprehensive set of measures aimed at transforming abandoned or inefficiently used areas into functional urban spaces. The process relies on an interdisciplinary approach, combining urban planning, environmental assessment, economic justification, and institutional support. Its