USE OF ARTIFICIAL NEURAL NETWORKS
IN THE STATE CADASTRAL VALUATION OF LAND PLOTS

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At present, real estate cadastral valuation is carried out in large volumes and at regular intervals, which may reduce the objectivity and relevance of the results of such a valuation. In other words, the traditional cadastral valuations do not meet the current needs of society. The solution may be to use new techniques and technologies, such as neural networks. The automation of the cadastral valuation will reduce the estimation time, increase productivity and quality, and take into account all the individual characteristics of the property being evaluated. The subject of research is the calculation of the cadastral value of land plots using an artificial neural network. The object of this research is residential area land plots within the Novosibirsk boundaries which were divided into two segments: segment 2 "Residential constructions (mid-rise and high-rise)", segment 13 "Horticulture, low-rise residential constructions". The tasks of the research: the determination of factors which influence the cadastral value of real estate and their differentiation; accumulation of up-to-date information about real estate; preparation of data for creation of artificial neural network. And as a result were revealed the basic and additional cost-affecting factors, which then were differentiated for further development of artifitial neural network capable of calculating the cadastral value in automated mode.

Keywords: cadastral valuation, problems of real estate valuation, land plots, cadastre, municipal administration, artificial neural network, automation of cadastral valuation

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