

References:

1. Kristesiashvili E.: Economics of Construction, 158 p., Tbilisi (2018).
2. Kristesiashvili E.: Stumpf I. Construction quality in Georgia. 56 p., Bonn (2017).
3. Barkalov C. A.: Methods of construction of integral evaluation of organizational-technological decisions (2016)
4. Robertson B.: Quality in Construction Projects, Suncor Energy, 4 pp., Canada. (2016)

PROBLEM DETECTION IN NETWORK ROUTER PROTOCOLS AND ALGORITHM OF WAYS TO ELIMINATE IT

***Marina Kurdadze, ** Ia Iremadze**

* Georgian Technical University. Department of Digital Telecommunication Technologies.,

m.kurdadaze@gtu.ge,

**, Technical University of Georgia. Department of Information Technologies,

i.iremadze@gtu.ge

The Internet, based on the IP protocol and packet routing, is the foundation of the World Wide Web. Many types of network devices and technologies, including routers and routing protocols, are used to interconnect local area networks in a global network, which have both advantages and disadvantages. A router or its protocol malfunctioning can cause a lot of damage to the network and its users. To prevent the problem, it is necessary and recommended to perform daily monitoring of the network, if a problem is detected, it should be eliminated at the initial stage.

The work deals with the detection of the problem in the router protocols and the creation of an algorithm for its elimination, for which, based on specific examples, a research of the routing process was conducted and the sequence of activities, according to which the

packet routing is carried out from the source to the receiver. In general, the routing process is quite simple and does not change regardless of the size of the network, but each process requires a thorough analysis. In order to simplify the analysis, examples are given in the work, which include all the steps and are executed during the transmission of the packet.

It is clear that it is possible to successfully solve problems in the network with different approaches. A random approach is less efficient in terms of problem detection than a preformed, structured problem detection method. Problem detection, diagnosis and its elimination is the sequence according to which it is possible to solve the problem at the initial stage.

MATHEMATICAL MODELS FOR SOLVING ENVIRONMENTAL WATER OBJECTS POLLUTION PROBLEMS AND THEIR SOFTWARE REALIZATION

Kartlos Kachiashvili**, Vakhtang Kvaratskhelia***

* Georgian Technical University, Faculty of Informatics and Control Systems, Tbilisi, Georgia, k.kachiashvili@gtu.edu.ge

Georgian Technical University, Muskhelishvili Institute of Computational Mathematics, Tbilisi, Georgia

** Tbilisi State University, I. Vekua Institute of Applied Mathematics, Tbilisi, Georgia,

v.kvaratskhelia@gtu.ge

One-, two- and three-dimensional convective-diffusion models of pollutants transport in rivers and their applications for solving different environmental problems are presented in the work. Such models are used in establishing governmental regulations for environmental protection. The mathematical models and computer systems could be applied also at both the pre-designing stage of measures and facilities and in the process of practical use of the facilities. In this respect mathematical modeling of water levels in rivers and the processes of transport and diffusion of chemicals could