

In this work, we described software surrounding's for protocol analysis and learning about computer networks by using spectral graph theory. Software surrounding's consists of the computer network simulators and software surrounding's for spectral graph analysis which allows students get to know Internetworking technologies. System made in Java programming language, allows editing of the arbitrary topology computer network with switches, hubs, routers, and work stations. Configuration of elements of the network is done by using standard Windows or line interface. The visual tracking of IP packages, and also the content of the IP packages and frames is allowed. Basic component of this system is software package for generating corresponding graph and calculating the basic parameters from spectral graph theory and analysis of computer network of the given topology and type of protocol.