

ENHANCING THE EFFECTIVENESS INSIDE A MULTISERVICE NETWORK

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Relevance. conduct a comparative analysis of existing technologies for building transportation networks of the oil industry and justify the operational and technical requirements for the projected network. also develop a block diagram of the network. calculate the main technical parameters of the designed backbone network.

Goal of the work – The objective of the research is the modernization of the telecommunication network of the Iraqi oil industry. This is since obsolete technologies and equipment is still widely used for monitoring and managing the oil industry, productivity is at a low level of development.

Result analysis – A microwave communication line was designed to ensure the exchange of information between control center, management station and the metering station substation. As the equipment, we chose equipment that works on the principles of a synchronous digital hierarchy, which allows us to transport STM-1 and STM-1/4 level signals, Ethernet technology equipment that allows transmitting information at a speed of 1 Gbit / s, new-generation microwave equipment, via optical cable allowing to transmit information at a speed of 384 Mbit / s in full duplex. The designed network is a fiber-optic communication line with a length of 201 km and 33 km for microwave communication. For the SDH and Ethernet technologies, Natex multiplexers and switches were selected, and Alcoma equipment and the ValuLine brand antenna system were chosen for microwave communication.

Conclusion. It was developed the concept of building a departmental communications network of the oil industry of Iraq. The communication network was designed according to the radial-ring principle using an optical cable. A microwave communication line was also designed to ensure the exchange of information between control center, management station and the metering station substation. As the equipment, we chose equipment that works on the principles of a synchronous digital hierarchy, as a result, data were obtained on the network load, the main parameters of the fiber optic, network reliability, availability factors, and signal levels. It is shown that the designed network provides the required system availability factor for transmission.