

Within the Serbian branch of the International Council on Large Electric Systems, CIGRE, group of authors presented a conceptual model of an integral network being the basis for ultimate development of its architecture. The paper lists the standards and protocols used in an integral network, but also the ones that may be applied in the future. Typical telecommunication solutions were presented applied in the power network.

An integral part of the infrastructure, without which it is impossible to introduce the concept of intelligent networks, is the telecommunication system. In the last 10 years, intensive development of communication technologies enabled the use of different requirements in integral networks.

The authors used the tables to illustrate the conceptual model of an integral network forming the basis for its development. They provided a list of current communication protocols and standards applied in an integral power network.

Following the analysis implemented for the main communication routes, for the purposes of an integral network, the authors' propose the use of wireless access to the Internet data, the so-called WiMAX technique or optical connections, and a back-up route, some of the public communication services having the necessary bandwidth.

Regardless of the recommended typical solutions, the authors suggest that, due to the design savings, a fibre-optic cable should be planned for every power cable. When it comes to transmission lines, every new transmission line should be accompanied with a non-metallic bundle-assembled areal cables - ADSS or a mini optical OPGW grounding or optical phase conductors OPPC. If the individual substations are located in residential, commercial, industrial buildings or in their immediate vicinity, it is necessary to provide space for fibre optic cables leading to these substations to avoid unnecessary costs, transmits Serbia-energy.eu