WHY GPON TECHNOLOGY IS SUITABLE FOR IMPLEMNTING FTTX ARCHITECTURE NETWORK IN KOSOVO

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Abstract

In the recent years, the telecommunication networks has been upgraded and developed more than ever before. In this context the fiber optic is the latest transmission medium which has done great increases possibility for different services. The aim is to make connections between customers or businesses to access the tri-ply services with performance (QoS) and more secure than with copper cable. Between other improvements the significant advance is to reduce equipment and maintenance. Although the fiber network is similarly in many countries, there exist significant differences between topologies implementation. There exist the Active Solution (Technology) and Passive Solution (Technology). The GPON (Gigabit Passive Optical Network) actually is proposed and assumption for implementing the FTTX architecture network in Kosovo. Assumption is made by PTK-Post and Telecom of Kosovo.
For different media and services requiring the high cost for connecting each subscriber with optical fiber. In this context are developed many type of topology. From the collection data for our topology depended by residential customers is more suitable the use of GPON technology. It is very adaptive with EPON technology, having in consideration that a number of building has upgrade the LAN network through UTP cable or similarly. This technology (GPON) is very complicated as network being increase in number of customers and networks, but is not the same things for every country. In this paper is presented why this technology is more suitable for implementation the FTTX architecture in Kosovo. Which are challenges (including attenuation through splitters) and advantages for those conditions? Here is presented and explored and power supply issue. Critical state for this decision is described throughout policies and conditions for providing the power supply, for presence or absence the same in required time and required place. The paper has statistical and descriptive nature, used by deductive methods. Also here are in use quantitative and qualitative research mainly based in customer topology in Kosovo.

Keywords*: Gigabit technology, optical network, passive network, infrastructure, topology.*