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# Comparision of 8-channel and 16-channel Energy Efficient Spectrum Sliced WDM-PON Systems

Sandis Spolitis, Vjaceslavs Bobrovs and Girts Ivanovs

The present paper discusses and compares the performance of energy and cost efficient 8-channel and 16-channel spectrum-sliced wavelength-division-multiplexed passive optical networks (SS-WDM PONs) operating at 2.5 Gbit/s transmission speed and realized by slicing of spectrally-uniform amplified spontaneous emission (ASE) source. It is demonstrated that SS-WDM PON access systems are able to provide data transmission for downstream traffic in a 20 km reach with BER<$10^{-10}$ by using additional chromatic dispersion compensation techniques, namely dispersion compensation fiber and fiber Bragg grating.