OPTICAL FIBER DISPERSION ANALYSIS USING JDSU MTS-8000 OPTICAL ANALYZER

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Abstract

Fiber optics has an advantage compared to the other conventional communication system such as a wide bandwidth. Pulse broadening where distribute pulse goes to fiber optics at the edge of receiver will getting wide because the length of propagation is called dispersion. While PT.telkom has done dispersion analysis for the G.652, G.653, G.655 cable. so that needed to dispersion analysis for combined of different fiber optics cable. Sets of equipment that could dispersion measure of fiber optics is JDSU MTS-8000 DWDM Optical Analyzer. At this final project take a sample at area Rungkut-Darmo-Tandes/Kayun/Gubeng with reference of wavelength 1310 nm, 1550 nm, 1480 nm, dan 1625 nm. Beside used single cable and combine of two cable it is also used theoritics calculation to compare the result of dispersion. Base on researchment at single cable that fill DWDM technology is G.655 with dispersion value 4,7602 ps/km.nm then for double cable it's known that the best cable is combination between G.653&G.655 with dispersion value 2,5438 ps/km.nm.

Keywords : Fiber Optics, Dispersion, Chromatic Dispersion, Opticsal Analyzer