Wavelength Assignment in WDM Networks

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Abstract: Advent of WDM has enabled us to use the optical fibres to its full capacity by multiplexing different signals into the same fibre. In an established network there is a need to optimize the use of number of wavelengths to minimize the use of network resources. Once the lightpaths are established the wavelength assignment problem mainly can be solved as graph coloring problem. Graph coloring algorithms are analyzed and compared with respect to number of colours used and the computation time**.**

Keywords: Graph Coloring, Wavelength Division Multiplexing, Chromatic Number, Routing and Wavelength Assignment, Lightpath