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Investigation on the techniques developed in spectrum slicing

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Abstract - Literature review revealed, various techniques for spectrum slicing of a broadband source used in microwave photonic filters . Use of Michelson interferometer, Fiber Bragg Gratings (FBG), Fabry-Perot filter, Arrayed Waveguide Gratings (AWG) and other components for finer and clearer spectrum slicing are investigated. Each technique is different from the other, on the basis of tenability, maximum number of spectral slices, Free spectral range (FSR), band pass central frequency and side lobe suppression level. Advantages of a technique over its preceding ones have been discussed in terms of tenability, reconfigurability, sidelobe suppression level and cost .Demerits of above techniques lead to suggestions in improvement in the filter performances . Optical CAD rules for the design of spectrum sliced microwave photonic filters are also proposed .