

Title (en)  
FREE-SPACE OPTICAL SYSTEMS FOR WAVELENGTH SWITCHING AND SPECTRAL MONITORING APPLICATIONS

Title (de)  
OPTISCHE FREIRAUMSYSTEME FÜR WELLENLÄNGENVERMITTLUNGS- UND SPEKTRALE ÜBERWACHUNGSANWENDUNGEN

Title (fr)  
SYSTEMES OPTIQUES DANS L'ESPACE LIBRE POUR COMMUTATION LAMBDA ET APPLICATIONS DE SURVEILLANCE DU SPECTRE

Publication  
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Application  
**EP 02766333 A 20020919**

Priority

- US 0230013 W 20020919
- US 96156501 A 20010920
- US 99277801 A 20011114
- US 2230301 A 20011214

Abstract (en)  
[origin: WO03025630A2] This invention provides a novel method and apparatus which use a wavelength-dispersing means such as a diffraction grating to spatially separate a multi-wavelength optical signal along with a reference signal by wavelength into multiple spectral channels and a reference spectral component in a spectral array with a predetermined relative alignment. By aligning the reference spectral component at a predetermined location, the spectral channels simultaneously impinge onto designated locations, e.g., on an array of beam-receiving elements positioned in accordance with the spectral array. The reference spectral component may be further maintained at the predetermined location by way of servo-control, thereby ensuring that the spectral channels stay aligned at the designated locations. The present invention can be used to construct a new line of servo-based optical systems, including spectral power monitors and optical multiplexers/demultiplexers, for WDM optical networking applications.

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Citation (search report)

- [A] US 5777733 A 19980707 - RADZIUK BERNHARD [DE]
- [A] US 4692883 A 19870908 - NELSON MICHAEL R [US], et al
- See references of WO 03025630A2

Citation (examination)  
JP S59170815 A 19840927 - HITACHI LTD

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**WO 03025630 A2 20030327**; **WO 03025630 A3 20030731**; CA 2460975 A1 20030327; CA 2460975 C 20100810; CN 1610850 A 20050427; CN 1610850 B 20100428; EP 1428052 A2 20040616; EP 1428052 A4 20041208; JP 2005527784 A 20050915; JP 4223951 B2 20090212

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