

Title (en)
MULTI-WAVELENGTH CROSS-CONNECT OPTICAL NETWORK

Title (de)
MULTIWELLENLÄNGEN OPTISCHES QUERVERBINDUNGSNETZWERK

Title (fr)
RESEAU OPTIQUE A SOUS-REPARTITION A LONGUEURS D'ONDES MULTIPLES

Publication
EP 1002383 A4 20020814 (EN)

Application
EP 98938062 A 19980728

Priority

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- US 90755197 A 19970808

Abstract (en)
[origin: WO9908403A1] An optical cross-connect network provides wavelength routing of optical channels between two arrays of optical fibers carrying WDM signals using interconnected arrays of optical wavelength switches based on combinations of a 1 x 2 wavelength switch architecture. The cross-connect network can be made by interconnecting two arrays of 1 x 4 wavelength switches (10, 20), each of which is made by combining three 1 x 2 wavelength switches (11, 12, 13). Each 1 x 2 optical wavelength switch includes a polarization separation element (3) that decomposes and spatially separates the input signal into two orthogonally-polarized beams, and a wavelength filter (61) that decomposes into the beam pair into two pairs of orthogonally-polarized beams that carry a first spectral band at a first polarization and a second spectral band at an orthogonal polarization. A polarization-dependent routing element (50) spatially separates these four beams into four orthogonally-polarized components. A polarization combining element (70) recombines the beams carrying the first spectral band, and also recombines the beams carrying the second spectral band at the output ports based on the control state of the wavelength switch.

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Citation (search report)

- [PA] US 5694233 A 19971202 - WU KUANG-YI [US], et al
- [A] US 5414540 A 19950509 - PATEL JAYANTILAL S [US], et al
- See references of WO 9908403A1

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