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(21) International Application Number: PCT/US99/00768 (22) International Filing Date: 14 January 1999 (14.01.99) (30) Priority Data: 09/006,962 14 January 1998 (14.01.98) US (71) Applicant: MCI WORLDCOM, INC. [US/US]; 515 East Amite Street, Jackson, MS 39201 (US). (72) Inventors: NATHAN, Sridhar; 716 Sunkist Lane, Plano, TX 75025 (US). FEE, John, A.; 2517 Regal Road, Plano, TX 75075 (US). (74) Agent: GROLZ, Edward, W.; Scully, Scott, Murphy & Presser, 400 Garden City Plaza, Garden City, NY 11530 (US).		(81) Designated States: CA, JP, MX, SG, European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i>

(54) Title: SYSTEM AND METHOD FOR SHARING A SPARE CHANNEL AMONG TWO OR MORE OPTICAL RING NETWORKS

(57) Abstract

A system and method for sharing a spare channel (316) among two or more optical ring networks (202, 204) that have a common span (316). A first optical cross-connect switch OCCS (308) and a first OCCS controller (306) are placed at one end of the span (316) and a second OCCS switch (312) and a second OCCS controller (310) are placed at the other end of the span (316). The first OCCS (308) and the first OCCS controller (306) are coupled to a first ADM (K, A) from each optical ring, and the second OCCS switch (312) and the second OCCS controller (310) are coupled to a second ADM (G, F) from each optical ring. The first OCCS controller (306) receives alarm indications from each ADM that it is coupled to that senses a ring failure. The second OCCS controller (310) receives alarm indications from each ADM that it is coupled to that senses a ring failure. Upon receiving an alarm indication, the first OCCS controller (306) directs the first OCCS switch (308) to optically couple the ADM that originated the alarm indication to the spare channel (316), and the second OCCS controller (310) directs the second OCCS switch (312) to optically couple the ADM that originated the alarm indication to the spare channel (316).

