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(71) Applicant: MCI WORLDCOM, INC. [US/US]; 515 East Amite Street, Jackson, MS 39201 (US).

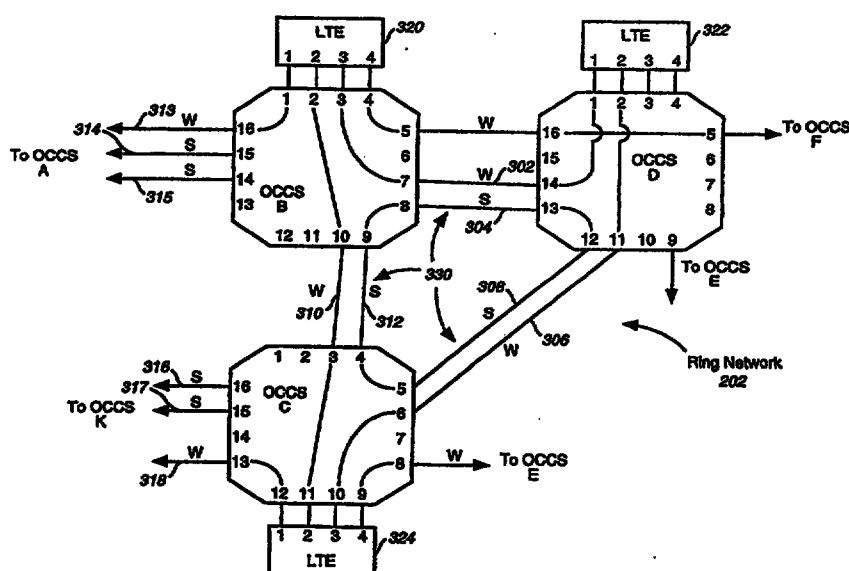
(72) Inventors: FEE, John, A.; 2209 Red Oak Lane, Richardson, TX 75082 (US). NATHAN, Sridhar; 716 Sunkist Lane, Plano, TX 75025 (US).

(74) Agent: GROLZ, Edward, W.; Scully, Scott, Murphy & Presser, 400 Garden City Plaza, Garden City, NY 11530 (US).

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(54) Title: RING/MESH OPTICAL NETWORK



(57) Abstract

A plurality of optical cross-connect switches (OCCS B, OCCS C, OCCS D) are freely interconnected (302, 304, 306, 308, 310, 312) to form a mesh type network (202). At least three of the optical cross-connect switches are switched to form a line-switched ring network, thereby forming a ring/mesh network (202). Simply by changing the switching logic of the optical cross-connect switches within the ring/mesh network, new rings can be created and existing rings can be modified, thereby providing a great deal of flexibility to make changes to the network as traffic patterns change without incurring hardware costs or significant network downtime. Another advantage of the ring/mesh design approach is that spare capacity within the line-switched ring can be utilized by the mesh network, and spare capacity within the mesh network can be utilized by the line-switched ring, thereby significantly increasing the spare efficiency.