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Grover et al.

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(54) **EVOLUTION OF A
TELECOMMUNICATIONS NETWORK
FROM RING TO MESH STRUCTURE**

(75) Inventors: **Wayne D. Grover**, Edmonton (CA);
Matthieu Arnold Henri Clouqueur,
Edmonton (CA); **Kwun Kit Leung**,
Edmonton (CA)

(73) Assignee: **Telecommunications Research
Laboratories**, Edmonton (CA)

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G01R 31/08 (2006.01)

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(58) **Field of Classification Search** **370/254-258**
See application file for complete search history.

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Primary Examiner—Chi Pham

Assistant Examiner—Phuc Tran

(74) *Attorney, Agent, or Firm*—Christensen O'Connor
Johnson Kindness PLLC

(57) **ABSTRACT**

Ongoing growth in transport demand is served while deferring or eliminating expenditure for additional capacity by reclaiming the protection capacity and inefficiently used working capacity in existing multi-ring network. Reclamation is through re-design of the routing and restoration in the network using mesh principles within the pre-existing ring capacities. The installed working and protection capacity of existing rings is viewed as a sunk investment, an existing resource, to be “mined” and incorporated into a mesh-operated network that serves both existing and ongoing growth. A complete double or even tripling of demand could be supported with little or no additional capacity investment through the period of ring-to mesh conversion by ring-mining. An existing ring set may be converted to a target architecture of “p-cycles” instead of a span-restorable mesh, through placement of straddling span interface units to convert ring ADMs to p-cycle nodal elements.

10 Claims, 7 Drawing Sheets

