



US006421349B1

(12) **United States Patent**
Grover

(10) **Patent No.:** **US 6,421,349 B1**
(45) **Date of Patent:** **Jul. 16, 2002**

(54) **DISTRIBUTED PRECONFIGURATION OF SPARE CAPACITY IN CLOSED PATHS FOR NETWORK RESTORATION**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **08/893,491**

(22) Filed: **Jul. 11, 1997**

(51) **Int. Cl.**⁷ **G01R 31/08**

(52) **U.S. Cl.** **370/408; 370/227; 714/4**

(58) **Field of Search** **370/216, 218, 370/221-225, 228, 254, 255, 258, 907, 908, 226, 227; 714/4, 717, 712; 340/825.01, 825.02, 825.03, 827, 825.16**

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(57) **ABSTRACT**

A Method for restoring traffic in a network. The network includes plural distinct nodes interconnected by plural distinct spans, each span having working links and spare links. Each node has a digital cross-connect switch for making and breaking connections between adjacent spans forming span pairs at a node. Cross-connections between spare links in adjacent spans are made such that sets of successive nodes through which the adjacent spans form span paths form closed paths. A method of finding and construction closed paths is described in which statelets are broadcast through the network. In a preferred method of implementation of the method, the statelet broadcast occurs not in response to a network failure, but across the entire network before any particular span failure and may be carried out during normal network operations as a continual re-configuration of the network.

3 Claims, 12 Drawing Sheets

