

- [54] **METHOD AND APPARATUS FOR SELF-RESTORING AND SELF-PROVISIONING COMMUNICATION NETWORKS**
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[57] **ABSTRACT**

A method and apparatus of restoring communications between a pair of nodes in a network having an arbitrary number of nodes and an arbitrary number of spans interconnecting the nodes, each span having working circuits between nodes designated for transmitting actual communications traffic and spare circuits capable of, but not designated for, transmitting actual communications traffic, the method comprising the steps of (a) establishing one or more independent communication paths between the pair of nodes through a series of spare circuits of spans interconnecting the pair of nodes and other interconnected nodes in the network; and (b) redirecting communications traffic intended for one or more failed spans interconnecting the pair of nodes through one or more of the paths.

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76 Claims, 14 Drawing Sheets

