

(54) Title of the invention : TRANSMISSION PATH DETERMINATION SYSTEM AND METHOD FOR MULTI-PATH NETWORKS

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(57) Abstract :  
 The present invention discloses a system (100) and method (200) for determining transmission paths in multi-path networks. The system includes a processor (102) to identify candidate paths through various routing protocols, measure performance metrics, and assesses route diversity for network redundancy and fault tolerance. By dynamically adapting the selected transmission path based on real-time network conditions and implementing load balancing techniques, the system optimizes network performance and resource utilization. Furthermore, the generation of a network topology map aids in identifying backup routes during link failures. The system significantly enhances network efficiency, resilience, and fault tolerance, making it a valuable contribution to multi-path networks used in critical applications like data centers, cloud computing, and telecommunications networks.

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