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(57) Abstract :
 QUANTUM MESH NETWORKING FOR PROVIDING SECURE AND ULTRA-FAST INFORMATION EXCHANGE ABSTRACT This invention presents a Quantum Mesh Networking System designed to revolutionize information exchange by combining security and unprecedented speed. The system (100) includes quantum nodes (108) strategically distributed in a network, featuring quantum processors, memory units, and communication interfaces for secure data exchange. These nodes are interconnected by a dynamic mesh networking infrastructure (110), optimizing communication paths. Quantum communication channels (112) employ entanglement-based protocols and quantum key distribution for secure information transfer. Processing units (104) associated with each quantum node manage quantum information exchange, ensuring efficient network operations. Additionally, the method for ultra-fast information exchange leverages quantum entanglement, superposition, and tunneling. It enables instantaneous node-to-node communication, parallel processing via quantum superposition, and reduced latency through quantum tunneling. This innovation represents a transformative step towards achieving both security and ultra-fast information exchange in quantum mesh networks.

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