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2.3.1.2. Optimized link-state routing protocol
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2.3.2.2. Ad hoc on-demand distance-vector; 2.3.3. Hybrid routing protocols; 2.3.4. Hierarchical routing protocols; 2.3.5. Geographic routing protocols; 2.3.6. Routing protocols with power control; 2.3.7. Multicast routing protocols; 2.4. Conclusion; Chapter 3. Performance Evaluation of OLSR and AODV Protocols; 3.1. Introduction; 3.2. The AODV protocol; 3.2.1. Route establishment; 3.2.1.1. Path discovery; 3.2.1.2. Reverse path setup; 3.2.1.3. Forward path setup
3.2.1.4. Routing table management
3.2.2. Path maintenance; 3.3. The OLSR protocol; 3.3.1. Format of OLSR packets and node addresses; 3.3.2. Operation of the protocol; 3.3.2.1. Neighborhood sensing; 3.3.2.2. Topology management; 3.3.2.3. Routing; 3.4. Simulation environment; 3.4.1. The ns-2 network simulator; 3.4.2. Methodology; 3.4.3. Parameters to evaluate; 3.4.3.1. Average packet delay; 3.4.3.2. Packet delivery success rate; 3.4.3.3. Traffic overhead (TOH); 3.4.3.4. Route acquisition latency (RAL); 3.5. Results and analysis; 3.5.1. Packet delivery ratio; 3.5.2. Average packet delay
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3.5.4. Route acquisition latency; 3.6. Conclusion; Chapter 4. Quality of Service in MANETs; 4.1. Introduction; 4.2. QoS: a definition; 4.2.1. QoS in wired networks; 4.2.1.1. The IntServ/RSVP approach; 4.2.1.2. The DiffServ approach; 4.2.2. QoS in wireless networks; 4.2.2.1. QoS models; 4.2.2.2. Signaling; 4.2.2.3. Routing with QoS; 4.2.2.4. MAC layer; 4.3. The OLSRQoSUP protocol and QoS extensions; 4.3.1. Operation of the protocol; 4.3.1.1. Delay; 4.3.1.2. Bandwidth; 4.3.2. Sensing of neighborhood QoS parameters; 4.3.2.1. HELLO message extensions
4.3.2.2. Format of information base extensions

Sommario/riassunto

This work presents ad hoc networks and their characteristics. It explains a new protocol of routing with QoS as well as its implementation in a network simulator and compares it with the existing protocols. The book discusses the principle of the load balancing, treats the approaches of optimization of energy, and proposes a new approach with an analytical model that gives a better performance.
