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3.2.2.3. Comparative OLSR and AODV performance evaluation3.2.3. Realistic QoS objectives; 3.3. QoS architecture and relative QoS state of the art; 3.3.1. Different QoS components; 3.3.2. QoS models; 3.3.2.1. INSIGNIA approach; 3.3.2.2. SWAN approach; 3.3.2.3. FQMM approach; 3.3.2.4. Cross-layering approach; 3.3.3. QoS signaling; 3.3.4. QoS routing; 3.3.4.1. Complexity of QoS routing; 3.3.4.2. QoS extension of AODV; 3.3.4.3. QoS extensions of OLSR; 3.4. An example of QoS support: QoS OLSR; 3.4.1. Description of QoS OLSR; 3.4.2. Performance evaluation; 3.5. Conclusion; 3.5.1. Summary
3.5.2. Perspectives3.6. Bibliography; Chapter 4. Multicast Ad Hoc Routing; 4.1. Introduction; 4.2. Multicast routing in MANETs: a brief state of the art; 4.2.1. Classification; 4.2.2. Summary; 4.3. SRMP; 4.3.1. Description; 4.3.1.1. Selection criteria for FG nodes; 4.3.2. Operation; 4.3.2.1. Route request phase; 4.3.2.2. Reply phase and FG node selection; 4.3.2.3. Data forwarding; 4.3.3. Maintenance procedures; 4.3.3.1. Notification of neighbor existence mechanism; 4.3.3.2. Mesh refresh mechanism; 4.3.3.3. Link repair mechanism; 4.3.3.4. Pruning scheme; 4.4. Properties
4.5. Simulation results and analysis4.6. Conclusion; 4.7. Bibliography; Chapter 5. Self-organization of Ad Hoc Networks: Concepts and Impacts; 5.1. Introduction; 5.2. Self-organization: definition and objectives; 5.2.1. Definition; 5.2.2. Principles and objectives; 5.2.3. Local or distributed decisions?; 5.3. Some key points for self-organization; 5.3.1. Emergence of global behavior from local rules; 5.3.2. Local interactions and node coordination; 5.3.3. Minimizing network state information; 5.3.4. Dynamic environment adaptation; 5.4. Self-organization: a state of the art
5.4.1. Classification

Sommario/riassunto

Two new fields have recently appeared: mobile ad hoc networks and sensor networks. The emergence of these very promising systems is mainly due to great technological progress in the field of wireless communication protocols; these will make it possible to offer a broad range of new applications in both civilian and militarian domains. The inherent characteristics of these systems imply new challenges. This book deals with several relevant fields related to the evolution of these spontaneous and self-organized networks. The authors tackle critical problems such as the design of unicast/multicas