Explain the design goals of a MAC protocol for adhoc wireless network.

The design goals of a MAC protocol for ad hoc wireless networks are:

1. Distributed Operation: Decentralized decision-making for efficient medium access.
2. Collision Avoidance: Minimize simultaneous transmissions to prevent signal interference.
3. Energy Efficiency: Reduce power usage for battery-powered devices.
4. Fairness: Equitably share the channel resources among nodes.
5. Scalability: Work well in networks of varying sizes.
6. Adaptability: Quickly adjust to dynamic changes like node mobility.
7. QoS Support: Prioritize traffic based on application requirements.
8. Hidden Terminal Mitigation: Address issues when nodes can’t hear each other.
9. Security: Protect against unauthorized access and attacks.
10. Channel Utilization: Efficiently use available channel bandwidth.
11. Multimedia Traffic: Handle diverse data rate and delay needs.

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