



SNS COLLEGE OF ENGINEERING

Kurumbapalayam(Po), Coimbatore – 641 107

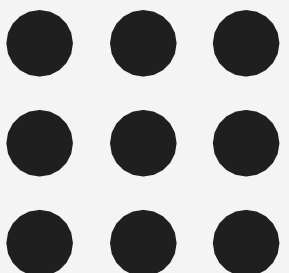
An Autonomous Institution

Accredited by NAAC-UGC with 'A' Grade

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19EC701 - ADHOC NETWORKS

Unit -2 – DATALINK LAYER – MAC PROTOCOLS – GOALS AND CLASSIFICATION





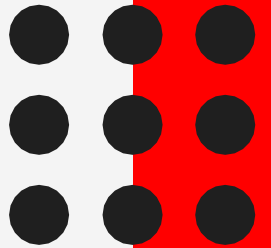
Design goals of a MAC Protocol

Design goals of a MAC protocol for ad hoc wireless networks

- The operation of the protocol should be distributed.
- The protocol should provide QoS support for real-time traffic.
- The access delay, which refers to the average delay experienced by any packet to get transmitted, must be kept low.
- The available bandwidth must be utilized efficiently.
- The protocol should ensure fair allocation of bandwidth to nodes.
- Control overhead must be kept as low as possible.

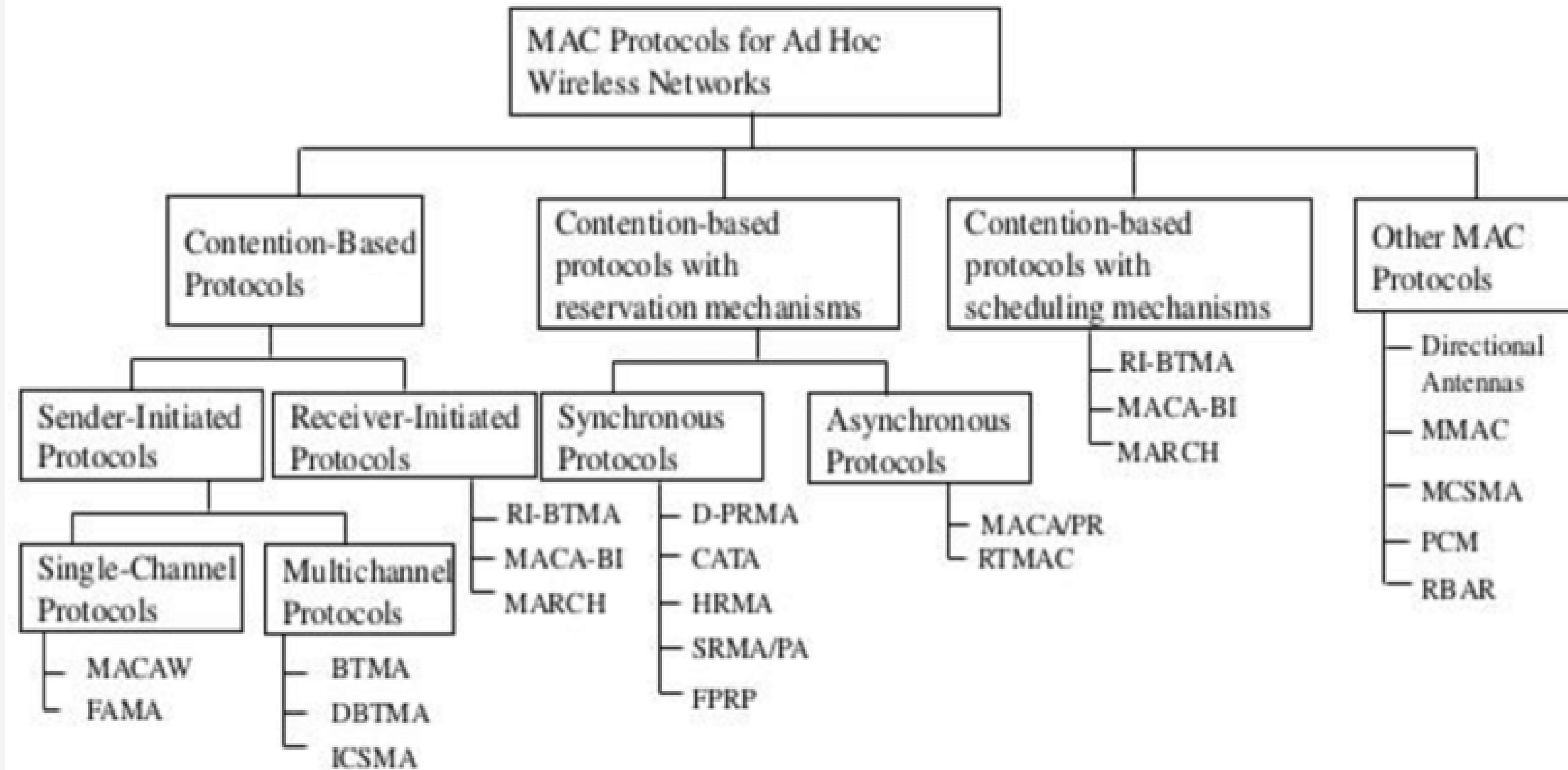


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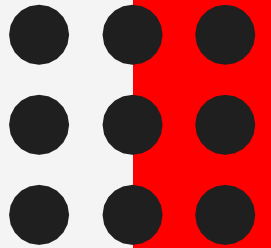
- The protocol should minimize the effects of hidden and exposed terminal problems.
- The protocol must be scalable to large networks.
- It should have power control mechanisms.
- The protocol should have mechanisms for adaptive data rate control.
- It should try to use directional antennas.
- The protocol should provide synchronization among nodes.

Classification of MAC Protocol





Classification of MAC Protocol



- **Contention-based protocols without reservation/scheduling –**
 - Bandwidth are not reserved.
 - No guarantees.
- **Contention-based protocols with reservation mechanisms –**
 - Bandwidth is reserved for transmission.
 - Guarantees can be given.
- **Contention-based protocols with scheduling mechanisms –**
 - Distributed scheduling is done between nodes.
 - Guarantees can be given.
- **Other protocols –**
 - Combine multiple features of other protocols.
 - It can also use a completely new approach.



Assessment

List out classification of MAC Protocol?





THANK YOU