

A SURVEY ON PREVENTING ATTACKS IN WIRELESS COMMUNICATION NETWORKS

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Wireless communication networks facilitate data transfer between nodes without physical connections, using electromagnetic waves at the physical layer. Despite advances that have enhanced their speed and security, these networks remain vulnerable to unauthorized access, particularly in public and shared environments. Common security threats include network breaches that compromise privacy and data integrity. Although security protocols like WEP and WPA have been developed to mitigate these risks, their effectiveness varies, with WPA providing stronger protection. The popularity of wireless networks is driven by their ease of use, cost-effectiveness, and flexibility, making them ideal for situations where cabling is impractical. Effective security measures, robust protocols, and ongoing technological improvements are essential to address emerging threats and ensure the secure and reliable operation of wireless networks. This survey paper explores the challenges and solutions in preventing attacks in wireless communication networks.