1- Introduction The section provides a comprehensive overview of the rapid advancements in mobile terminal technology and mobile Internet technology, leading to the emergence of Mobile Wireless Sensor Networks (MWSNs) as a new trend in Wireless Sensor Networks (WSNs) development.By integrating modern technologies and effective protocols, their capability to meet various application requirements and achieve maximum utilization across different fields will be enhanced.In this section, we categorize MWSN routing protocols into three groups: MSN routing protocols, MS routing protocols, and protocols for mobility of both sensor and sink nodes 4- Evaluation Metrics And Commercial Software Programs For MWSN 4.1 Evaluation Metrics in MWSN The evaluation metrics for MWSN routing protocols include: 1- Network lifetime: Duration from WSN initiation to termination of all nodes 2- Throughput: Total data sent over the network, indicating routing protocol efficiency.It discusses the different types of mobile and static sensor node environments required for various applications, outlining the components of a sensor node like sensing units, processing units, transceiver units, power units, and additional elements such as mobilizers and GPS devices.Wang et al. presented an Affinity Propagation-based Self-Adaptive (APSA) clustering protocol, combining the K-medoids learning method with the Affinity Propagation (AP) algorithm for improved clustering.Anisi et al. proposed the Fault-tolerant Energy-efficient Data Aggregation (FEDA) protocol, addressing noise, faults, and packet loss challenges in data transmission to enhance energy efficiency and accuracy.5- Challenges, Novel Trends, and Future Work In MWSNA 5.1 Challenges in MWSNs Despite the advancements in Mobile Wireless Sensor Networks (MWSN) research, several significant challenges remain unresolved, impacting network efficiency.Some of the main unresolved issues include: Optimizing MWSNs In MWSNs, there are still challenges like improving data routing, boosting throughput, cutting transmission delays, balancing energy use among nodes, and managing sensor loads.5.3 Future work In the future, research should focus on implementing routing protocols in real MWSN environments and integrating them with other networks like IoT, cloud computing, machine learning, big data, and DL. UAVs can be used for data collection and route optimization, while the SWITCH protocol can enhance reliability in IoT.Janarthanan and Kumar introduced the Localization Based Evolutionary Routing (LOBER) to achieve optimal results for aggregation and Wireless Multimedia Sensor Network (WMSN) lifespan.Additionally, it explores the role of MWSNs in monitoring and collecting information from sensed fields, detailing their composition of Mobile Sink (MS) and/or Mobile Sensor Nodes (MSNs) moving within the network.

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