

Asmaa Rady¹ 11 of 30 <https://doi.org/10.1002/dac.4942> can be occurred by attaching a mobile element to the transportation such as animals, vehicles, robots, or attending it with a mobilizer to control their locations.³ Some real-world applications require mobile and static sensor node environments in the

same network, whereas other applications demand full mobile sensor environments.⁴ As shown in Figure 1, many real-world applications are utilized MWSNs such as environmental monitoring, military applications, the intelligent homes design, security monitoring, search and rescue, life habit monitoring, patient status monitoring, battlefield evaluation, earthquake monitoring, forest fire monitoring, deep-sea

monitoring, target tracking, precision agriculture, community security, monitoring systems, industrial control, specifically in mobile forest fire alert systems, wearable medical, large-scale agricultural applications, and the nuclear radiation environment for safety monitoring systems.⁵ Many applications demand achieving coverage.

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Summary Mobile Wireless Sensor Networks (MWSNs) have emerged as a new evolution trend in Wireless Sensor Networks (WSNs) technology as a result of the growth and popularization of mobile terminal technology.

INTRODUCTION Due to the rapid growth of mobile terminal technology applications and mobile Internet technology, Mobile Wireless Sensor Networks (MWSNs) have emerged as a new trend in the advancement of Wireless Sensor

Networks (WSNs). KEYWORDS delay, Mobile sensor nodes (MSNs), Mobile sink (MS), Mobile wireless sensor networks (MWSNs), network lifetime, routing protocols

1 IWSNs' feature spectrum is greatly expanded by the mobility of nodes introduced by MWSNs. Moreover, the commercial software programs .for MWSNs are discussed