

A Review on Heterogeneous WSN Protocols

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Abstract: Energy saving is the rudimentary provocation in (WSNs). Energy of the WSNs can be preserved in many ways such as duty-cycling of nodes, clustering, Energy proficient routing, and data Energy etc. Good WSNs work on the principle of two issue firstly Energy saving and secondly good network lifetime. In WSNs protocols are found of two types heterogeneous and homogenous. Different types of nodes are used in this WSNs. Different Energy levels are found in these nodes. Different nodes arrangement, clustering scheme and algorithms are used in these WSNs protocols. Heterogeneity is related to different Energy uses and different nodes clustering. We give a Review on Energy Saving Clustering Based Protocols of HWSN in this study.

Keywords: HWSNs, clustering, Energy level, Sensor nodes, DEEC, DDEEC, EDEEC, BEENISH, IBEENISH

REFERENCES

- [1]. Parul Saini, Ajay k sharma Energy Efficient Scheme for Clustering Protocol Prolonging the Lifetime of Heterogeneous Wireless Sensor Networks International Journal of Computer Applications (0975 – 8887) Volume 6– No.2, September 2010
- [2]. Mansi Panwar, S.D. Samanta ray An Improved E-DEEC Protocol using Periodic and Threshold Sensitive Data Transmission in Heterogeneous Wireless Sensor Network International Journal of Computer Science Engineering (IJCSE) ISSN: 2319-7323 Vol. 4 No.04 Jul 2015
- [3]. Anurag Chatap, Sumedha Sirsikar Review on Various Routing Protocols for Heterogeneous Wireless Sensor Network International conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC 2017)
- [4]. Samayveer Singh a,† Aruna Malik b, Rajeev Kumar c Energy efficient heterogeneous DEEC protocol for enhancing lifetime in WSNs Engineering Science and Technology, an International Journal (2016) ELSEVIER
- [5]. Parul Saini, Ajay k sharma E-DEEC- Enhanced Distributed Energy Efficient Clustering Scheme for heterogeneous WSN2010 1st International Conference on Parallel, Distributed and Grid Computing (PDGC - 2010)
- [6]. Li Qing *, Qingxin Zhu, Mingwen Wang Design of a distributed energy-efficient clustering algorithmfor heterogeneous wireless sensor networks Computer Communications 29 (2006) 2230–2237 ELSEVIER
- [7]. Kenza Redjimi, Mohammed Redjimi on The DEEC and EDEEC Heterogeneous WSN Routing Protocols Int. J. Advanced Networking and Applications Volume: 13 Issue: 04 Pages: 5045-5051(2022) ISSN: 0975-0290
- [8]. T. N. Qureshi, N. Javaid, M. Malik, U. Qasim‡, Z. A. Khan§ on Performance Evaluation of Variants of DEEC in WSN August 2012
- [9]. V. Baby Shalini on Scrutinizing DEEC, TDEEC, BEENISH and IBEENISH Protocol in Heterogeneous Wireless Sensor Network's (WSN's) in International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-8 Issue-4S2, December 2019
- [10]. Brahim Elbhiri, Saadane Rachid, Sanaa El fkihi, Driss Aboutajdine on Developed Distributed Energy-Efficient Clustering (DDEEC) for heterogeneous wireless sensor networks 978-1-4244-5998-8/10/\$26.00 2010IEEE
- [11]. T. N. Qureshi, N. Javaid, A. H. Khan, A. Iqbal, E. Akhtar, M. Ishfaq on BEENISH: Balanced Energy Efficient Network Integrated Super Heterogenous Protocol for Wireless Sensor Networks published in International Workshop on Body Area Sensor Networks (BASNet-2013) in 2013 by Elsevier
- [12]. YINGHUI ZHANG, XIAOLU ZHANG, SHUANG NING, JING GAO, AND YANG LIU on Energy-

- Efficient Multilevel Heterogeneous Routing Protocol for Wireless Sensor Networks Received January 29, 2019, accepted February 13, 2019, date of publication February 21, 2019, date of current version May 9, 2019. *Digital Object Identifier 10.1109/ACCESS.2019.2900742*
- [13]. Sercan Vançın and Ebubekir Erdem on Research Article Threshold Balanced Sampled DEEC Model for Heterogeneous Wireless Sensor Networks in Hindawi Wireless Communications and Mobile Computing Volume 2018, Article ID 4618056, 12 pages <https://doi.org/10.1155/2018/4618056>
- [14]. Pankaj Kumar, N.C. Barwar on Performance And Comparative Analysis Of Distributed Energy Efficient Clustering Protocols In Wireless Sensor Networks published in International Journal of Advances in Electronics and Computer Science, ISSN: 2393-2835 Volume-3, Issue-7, Jul.-2016
- [15]. Gagandeep Kaur on Distributed energy efficient clustering (DEEC) protocols for enhancing energy efficiency and sensor lifespan in wireless sensor networks (WSNs) published in Turkish Journal of Computer and Mathematics Education Vol.11 No.03 (2020),1378- 1384 Research Article
- [16]. T. Morassini, R Thamma USA on An Extended Enhanced Distributed Energy Efficient Clustering for IOT based WSN routing protocols published in International Journal of Engineering and Innovative Technology (IJEIT) Volume 10, Issue 2, August 2020
- [17]. Bibhav Kr. Mishra, Vikas Pitliya, Arvind Kumar Jain on Comparative Study of Various Routing Protocols in Energy Distributed Clustering Based Heterogeneous Wireless Sensor Network published in International Journal of Engineering Research & Technology (IJERT) NCETECE'14 Conference Proceedings ISSN: 2278-0181
- [18]. Sahar Alsafi, Samani A. Talabon Implementation of DEEC, DDEEC, EDEEC and TDEEC Protocols using MATLAB in Wireless Sensor Network published in Int. J. Advanced Networking and Applications Volume: 12 Issue: 03 Pages: 4596-4600(2020) ISSN: 0975-0290
- [19]. V. Baby Shalini on Scrutinizing DEEC, TDEEC, BEENISH and IBEENISH Protocol in Heterogeneous Wireless Sensor Network's (WSN's) in International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-8 Issue-4S2, December 2019