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COOPERATIVE CACHE MANAGEMENT PERFORMANCES WITHIN MANETS

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ABSTRACT

Mobile Ad hoc Network are autonomously structured multi-hop wireless links in peer to peer fashion without aid of any infrastructure network. Due to lack of infrastructure support, each node in network act as router, coordinating to forward data packets to other nodes. Caching of frequently accessed data in ad hoc networks is a potential technique that can improve the data access, performance and availability. A cooperative cache-based data access framework lets mobile node cache the data or the path to the data to reduce query delays and improve data accessibility. Due to mobility and resource constraints of ad hoc networks, cooperative caching techniques designed for wired network may not be applicable to ad hoc networks. The objective of cooperative caching is to improve data availability and access efficiency by collaborating local resources of mobile devices. This paper reviews the various cooperative cache management techniques in the mobile ad-hoc networks.

KEYWORDS: Mobile Adhoc Networks, Cooperative, Caching, Cache Resolution

REFERENCES:

- 1. E. Nordström, P. Gunningberg, and C. Tschudin, "Robust and flexible Internet connectivity for mobile ad hoc networks," *Ad Hoc Networks*, vol. 9, no. 1, pp. 1–15, 2011, doi: 10.1016/j.adhoc.2010.04.003.
- Y. Sun, E. M. Belding-Royer, and C. E. Perkins, "Internet Connectivity for Ad hoc Mobile Networks," *Int. J. Wirel. Inf. Networks*, vol. 9, no. 2, pp. 75–88, 2002, doi: 10.1023/A:1015399632291.
- **3.** H. Jin, D. Xu, C. Zhao, and D. Liang, "Information-centric mobile caching network frameworks and caching optimization: a survey," *Eurasip Journal on Wireless Communications and Networking*. 2017, doi: 10.1186/s13638-017-0806-6.
- 4. P. M. Ruiz, F. J. Ros, and A. Gomez-Skarmeta, "Internet connectivity for mobile ad hoc networks: Solutions and challenges," *IEEE Commun. Mag.*, vol. 43, no. 10, pp. 118–125,

SAJMMR

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2005, doi: 10.1109/MCOM.2005.1522134.

- J. Hoebeke, I. Moerman, B. Dhoedt, and P. Demeester, "An overview of mobile ad hoc networks: Applications and challenges," *Journal of the Communications Network*, vol. 3, no. 3. pp. 60–66, 2004.
- 6. G. M. Chiu and C. R. Young, "Exploiting in-zone broadcasts for cache sharing in mobile ad hoc networks," *IEEE Trans. Mob. Comput.*, vol. 8, no. 3, pp. 384–397, 2009, doi: 10.1109/TMC.2008.127.
- 7. L. Yin and G. Cao, "Supporting cooperative caching in ad hoc networks," *IEEE Trans. Mob. Comput.*, vol. 5, no. 1, pp. 77–89, 2006, doi: 10.1109/TMC.2006.15.
- 8. S. Glass, I. Mahgoub, and M. Rathod, "Leveraging MANET-Based Cooperative Cache Discovery Techniques in VANETs: A Survey and Analysis," *IEEE Communications Surveys and Tutorials*, vol. 19, no. 4. pp. 2640–2661, 2017, doi: 10.1109/COMST.2017.2707926.
- J. Al-Badarneh, Y. Jararweh, M. Al-Ayyoub, R. Fontes, M. Al-Smadi, and C. Rothenberg, "Cooperative mobile edge computing system for VANET-based software-defined content delivery," *Comput. Electr. Eng.*, vol. 71, pp. 388–397, 2018, doi: 10.1016/j.compeleceng.2018.07.021.
- **10.** A. Mayank and C. V. Ravishankar, "Supporting mobile device communications in the presence of broadcast servers," in *International Journal of Sensor Networks*, 2007, vol. 2, no. 1–2, pp. 9–16, doi: 10.1504/IJSNET.2007.012977.