

Executive Summary

- TITLE:** D5.1.1: A review of broadcast protocols for VANETs
- PAPERS RELATED:** J. García-Nieto, J. Toutouh, E. Alba. **Automatic Tuning of Communication Protocols for Vehicular Ad-Hoc Networks Using Metaheuristics**. Engineering Applications of Artificial Intelligence. 23(5):795-805, August 2010, DOI: <http://dx.doi.org/10.1016/j.engappai.2010.01.012>
- J. García-Nieto and E. Alba. **Automatic Parameter Tuning with Metaheuristics of the AODV Routing Protocol for Vehicular Ad-Hoc Networks**. In LNCS of the Seventh European Workshop on the Application of Nature-inspired Techniques to Telecommunication Networks and other Connected Systems, (EvoCOMNET'10) EvoWorkshops10, Springer-Verlag, pp. 21-30, Istanbul, 2010
- ABSTRACT:** In vehicular ad hoc networks (VANETs), the efficiency of broadcasting protocol can dramatically affect the performance of the entire network. Appropriate use of broadcasting methods can reduce the number of rebroadcasting, therefore reduce the chance of contention and collision among neighboring nodes. A good broadcast protocol can achieve higher throughput and lower energy consumption, without sacrificing the reachability or having any significant degradation. A initial classification of broadcasting algorithms for VANETs consists of: simple flooding, probability based methods (PS and CBS), area base methods (DBS and LBS), neighbor knowledge methods (FSP, SBA, DP, MR, AHBP, CDS, and LENWB). An evaluation of these protocols can be found in [WC02], in which the IEEE 802.11 MAC specification is used to simulate all these protocols.
- GOALS:**
1. Classification of most relevant broadcasting methods for VANETs
 2. Performance evaluation of broadcasting protocols
- CONCLUSIONS:**
1. Broadcasting protocols are base methods for other top level protocols like routing and applications.
 2. Optimizing broadcast parameters is crucial for improving the overall network performance in VANETs.
- RELATION WITH PAST DELIVERABLES:** PRE: D4.3.1-2012 (advisable reading)
- OTHERS:** [WC02] B. Williams and T. Camp. 2002. Comparison of broadcasting techniques for mobile ad hoc networks. In Proceedings of the 3rd ACM international symposium on Mobile ad hoc networking & computing (MobiHoc '02). ACM, New York, NY, USA, 194-205. DOI=10.1145/513800.513825 <http://doi.acm.org/10.1145/513800.513825>
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