SAFE SPOT INTEGRATED PROJECT - IST-4-026963-IP

DELIVERABLE

SAFE SPOT
COORDINATIVE SYSTEMS FOR ROAD SAFETY

SP3 – SINTECH – Innovative Technologies

Vehicular Ad Hoc Networks Specifications

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<td>Specifications of Innovative Technologies for Vehicular Ad Hoc Networks</td>
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<td>Authors (per company, if more than one company provide it together)</td>
<td>Achim Brakemeier, Daimler AG, Michele Provera, Giuliana Zennaro, CRF, Tim Edwards, MIRA, Markus Shawky, CNRS, Dzmitry Kliazovich, Fabrizio Granelli, CREATE-NET</td>
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EXECUTIVE SUMMARY

The SAFESPOT Vehicular Ad Hoc Network (VANET) is responsible for message exchange between vehicles or between vehicles and road side units.

The cooperative SAFESPOT applications rely on a stable and reliable VANET. Therefore the VANET specifications include means to maintain the network (Beaconing) and to keep it reliable and stable (Congestion Control).

The main task of the VANET is the information distribution. For this purpose the VANET offers a variety of transmission schemes, e.g. multihop routing and geocast transmission. With Stored Geocast the VANET is tuned to various traffic scenarios, especially low and high traffic density scenarios with high and low penetration rates.

The multihop and geocast information distribution scheme rely on efficient geo-addressing. It is most important for the applications to understand the relationship between Relevance Function, Geo Address and Destination Area..

Safety applications often require a message transmission with low latency. For this reason priority handling together with an appropriate channel usage scheme are specified.