IEEE P802.11
Wireless LANs

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| Liaison from CAR 2 CAR Consortium re: NGV Use cases and requirements |
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Abstract

This document contains a liaison statement received from the CAR 2 CAR Consortium in response to the IEEE 802.11 WG request for comments on NGV use cases and requirements, see <https://mentor.ieee.org/802.11/dcn/18/11-18-1303-02-0ngv-liaison-requesting-feedback-on-ngv-usage-scenarios.docx> .

The received liaison is embedded below and reproduced on the following pages.



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Roskilde, 2018-10-08

**Reply to IEEE 802.11 WLAN Working Group Communication related to Next Generation V2X (NGV) Use Cases and Requirements**

We encourage the NGV group to develop specifications to support advanced use cases[[1]](#footnote-1) for improved mobility and safety in the 5.9 GHz as well as in other frequency bands.

We view the benefit of a new 802.11 amendment as primarily providing extended performance and/or robustness by using the latest PHY and MAC techniques. In addition, we encourage the consideration of a few new use cases such as positioning, that were not considered in the development of IEEE 802.11p.

In the meantime, it is important that the IEEE NGV group encourages stakeholders to continue the deployment of systems based on the IEEE 802.11p specification while the new amendment is being developed. If not handled properly, we see a risk that the development of a new amendment would discourage continued and new deployments during that time.

The NGV amendment should adhere to the following principles:

1. Since IEEE 802.11p meets all use case requirements for Day 1 and Day 2 deployment any amendment to these specifications shall be interoperable at system and protocol level with IEEE 802.11p for such use cases. The NGV shall be backward compatible and coexistent with IEEE 802.11p when using the 5.9 GHz band.
2. Every NGV-conformant device must interoperate with IEEE 802.11p devices meaning that it shall be capable of decoding all IEEE 802.11p-conformant transmissions in the 5.9 GHz band in 10 MHz channels. Furthermore, it must have at least one mode of transmission that can be decoded by an IEEE 802.11p-conformant device.
3. All NGV transmissions must at least be detectable through carrier sensing by IEEE 802.11p devices, even transmissions that the 802.11p device cannot fully decode. Furthermore, NGV devices must compete fairly1)[[2]](#footnote-2) with 802.11p devices for channel access.
4. An NGV device must be able to convey through some means, e.g. a capability field, that it is NGV-capable. It must be able to convey this even when it is transmitting an 802.11p-compliant frame. The capability indication should be extensible for future amendments of the IEEE 802.11 specification and could be part of the MAC/PHY or implemented in higher layers.

If these principles are followed, we believe that the IEEE NGV amendment can provide a seamless evolution path for IEEE-based V2X communications in coming years.

With kind regards,



Niels Peter Skov Andersen

**References:**

<https://mentor.ieee.org/802.11/dcn/18/11-18-1303-02-0ngv-liaison-requesting-feedback-on-ngv-usage-scenarios.docx>

1. Advanced use cases stand for use cases in addition to European Day 1 and Day 2 use cases. [↑](#footnote-ref-1)
2. for messages with the same priority the channel access should have the same probability

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