IEEE P802.11
Wireless LANs

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| Liaison from ETSI ITS re: NGV Use cases and requirements |
| Date: 2018-10-16 |
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Abstract

This document contains a liaison statement received from ETSI ITS 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.



**LIAISON STATEMENT**

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

Date: 12. October 2018

**From** (source): ETSI TC ITS

Contact(s): Chairman Mr. Niels Peter Skov Andersen,

(npa@anemonetechnology.com)

**To:** IEEE802.11 WG Chairperson Dorothy Stanley,

(dstanley@ieee.org)

**Copy to:** ETSI ERM TG37, Chairman Mr. Hans Johansson (hans.johansson@kapsch.net)

ETSI Technical officer TC ITS, Mr. Andrea Lorelli

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Car 2 Car Communication Consortium

(npa@anemonetechnology.com)

IEEE 1609 WG (tkstds@mindspring.com)

Response to:

(if applicable)

Attachments:

(if applicable)

Dear Dorothy,

Thank you very much for informing ETSI TC ITS about the actual status of the Study Group in IEEE802.11 on Next Generation Vehicular (SG NGV).

During the last ETSI TC ITS meeting #32 (8.10 – 12.10.2018) in Sophia Antipolis your information has been discussed.

We encourage the NGV group to develop specifications to support advanced use cases1 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 and rail, 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 included in IEEE802.11-2016 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 based ITS 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 fairly[[1]](#footnote-1))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 802.11pcompliant 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.
5. ETSI TC ITS supports the inclusion of investigations of the 60GHz band into the NGV scope of work. A corresponding harmonized standard is under development in ETSI ERM TG37.

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. ETSI TC ITS is open to incorporate the resulting access layer technologies, where appropriate, into the future updates of the ETSI ITS set of specifications and standards.

Best Regards,

Niels Peter Skov Andersen

Chairman ETSI TC ITS

Next TC ITS meetings:

TC ITS#33: 21. – 25. Januar 2019 at ETSI HQ, Sophia Antipolis, France TC ITS#34: 18. – 22. April 2019 at ETSI HQ, Sophia Antipolis, France

Notes:

2 for messages with the same priority the channel access should have the same probability

**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)